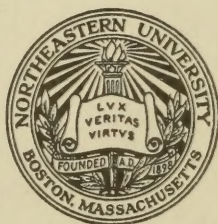


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Northeastern University

DAY DIVISION

COLLEGE OF
LIBERAL ARTS



1940-1941

BOSTON, MASSACHUSETTS

January, 1940

450

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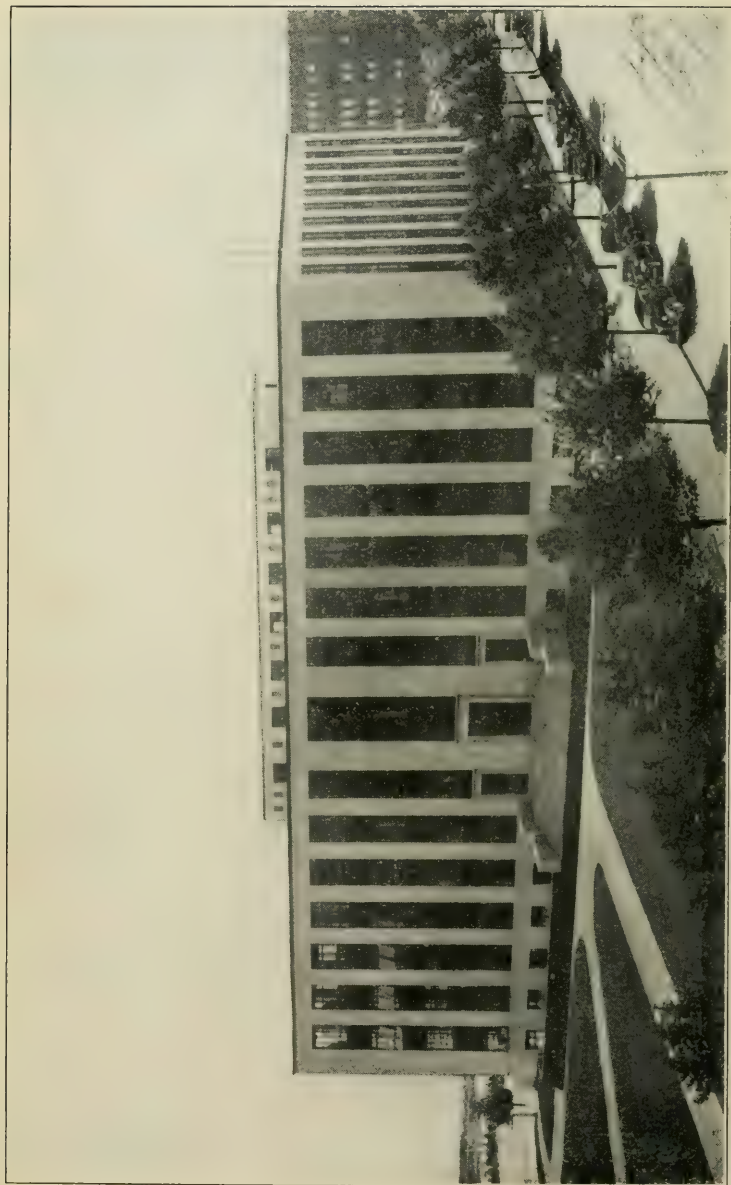
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President of the University

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Secretary and Treasurer

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WEST BUILDING — NORTHEASTERN UNIVERSITY

NORTHEASTERN UNIVERSITY

DAY DIVISION

COLLEGE OF LIBERAL ARTS

Conducted on the Co-operative Plan

Catalogue for 1940-1941

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Freshman Calendar, 1940-1941

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JANUARY

S	M	T	W	T	F	S
			1	2	3	4
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY

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						1
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23	24	25	26	27	28	

MARCH

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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL

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27	28	29	30			

MAY

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18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

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6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Days on which college exercises are held are indicated thus: **1, 2, 3.**

Sundays, holidays, and vacations are indicated thus: 1, 2, 3.

Upperclass Calendar, 1940-1941

SEPTEMBER

S	M	T	W	T	F	S
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(8)	9	10	11	12	13	14
(15)	16	17	18	19	20	21
(22)	23	24	25	26	27	28
(29)	30					

OCTOBER

S	M	T	W	T	F	S
			1	2	3	4
(6)	7	8	9	10	11	(12)
(13)	14	15	16	17	18	19
(20)	21	22	23	24	25	26
(27)	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
(3)	4	5	6	7	8	9
(10)	11	12	13	14	15	16
(17)	18	19	20	21	22	23
(24)	25	26	27	(28)	29	30

DECEMBER

S	M	T	W	T	F	S
(1)	2	3	4	5	6	7
(8)	9	10	11	12	13	14
(15)	16	17	18	19	20	21
(22)	23	24	(25)	26	27	28
(29)	30	31				

JANUARY

S	M	T	W	T	F	S
			(1)	2	3	4
(5)	6	7	8	9	10	11
(12)	13	14	15	16	17	18
(19)	20	21	22	23	24	25
(26)	27	28	29	30	31	

FEBRUARY

S	M	T	W	T	F	S
						1
(2)	3	4	5	6	7	8
(9)	10	11	12	13	14	15
(16)	17	18	19	20	21	(22)
(23)	24	25	26	27	28	

MARCH

S	M	T	W	T	F	S
						1
(2)	3	4	5	6	7	8
(9)	10	11	12	13	14	15
(16)	17	18	19	20	21	22
(23)	24	25	26	27	28	29
(30)	31					

APRIL

S	M	T	W	T	F	S
			1	2	3	4
(6)	7	8	9	10	11	12
(13)	14	15	16	17	18	19
(20)	21	22	23	24	25	26
(27)	28	29	30			

MAY

S	M	T	W	T	F	S
					1	2
(4)	5	6	7	8	9	10
(11)	12	13	14	15	16	17
(18)	19	20	21	22	23	24
(25)	26	27	28	29	(30)	31

JUNE

S	M	T	W	T	F	S
(1)	2	3	4	5	6	7
(8)	9	10	11	12	13	14
(15)	(16)	(17)	(18)	(19)	(20)	(21)
(22)	(23)	(24)	(25)	(26)	(27)	(28)
(29)	(30)					

JULY

S	M	T	W	T	F	S
		(1)	(2)	(3)	(4)	(5)
(6)	(7)	(8)	(9)	(10)	(11)	(12)
(13)	(14)	(15)	(16)	(17)	(18)	(19)
(20)	(21)	(22)	(23)	(24)	(25)	(26)
(27)	(28)	(29)	(30)	(31)		

AUGUST

S	M	T	W	T	F	S
					(1)	(2)
(3)	(4)	(5)	(6)	(7)	(8)	(9)
(10)	(11)	(12)	(13)	(14)	(15)	(16)
(17)	(18)	(19)	(20)	(21)	(22)	(23)
(24)	(25)	(26)	(27)	(28)	(29)	(30)
(31)						

Days on which Division A students are in college are indicated thus: 1, 2, 3.

Days on which Division B students are in college are indicated thus: **1, 2, 3.**

Sundays, holidays, and summer periods are indicated thus: (1), (2), (3).

Calendar for the College Year, 1940-1941

1940

AUGUST 28 *Wednesday.* Entrance condition examinations.

SEPTEMBER 2 *Monday.* Labor Day. (College exercises omitted.)

SEPTEMBER 5 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 5 will be charged a late registration fee of five dollars (\$5).

SEPTEMBER 9 *Monday.* Opening of college for Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.

OCTOBER 12 *Saturday.* Columbus Day. (College exercises omitted.)

NOVEMBER 18 *Monday.* Opening of college for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.

NOVEMBER 27 *Wednesday.* College exercises omitted after 1:00 p.m.

NOVEMBER 28 *Thursday.* Thanksgiving Day. (College exercises omitted.)

DECEMBER 24 *Tuesday.* College exercises omitted after 1:00 p.m.

DECEMBER 25 *Wednesday.* Christmas Day. (College exercises omitted.)

DECEMBER 23 }
JANUARY 4 } Vacation for freshmen.

1941

- JANUARY 1 *Wednesday*. New Year's Day. (College exercises omitted.)
- JANUARY 27 *Monday*. Second semester begins for freshmen and Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- FEBRUARY 22 *Saturday*. Washington's Birthday. (College exercises omitted.)
- APRIL 5 *Saturday*. College year ends for Division A upperclassmen.
- APRIL 7 *Monday*. Second semester begins for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- MAY 24 *Saturday*. College year ends for freshmen.
- MAY 30 *Friday*. Memorial Day. (College exercises omitted.)
- JUNE 14 *Saturday*. College year ends for Division B upperclassmen.
- JUNE 15 *Sunday*. Baccalaureate Sermon.
- JUNE 16 *Monday*. Commencement.
- JUNE 17 *Tuesday*. Bunker Hill Day. (College exercises omitted.)
- JULY 4 *Friday*. Independence Day. (College exercises omitted.)
- SEPTEMBER 1 *Monday*. Labor Day. (College exercises omitted.)
- SEPTEMBER 4 *Thursday*. Registration and opening of college for freshmen. Students failing to register promptly on September 5 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 8 *Monday*. Opening of college year 1941-1942.

Faculty

Executive Council

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D.	<i>President of the University</i>
Office 186 West Building	Res 21 Beaumont Ave., Newtonville
FRANK PALMER SPEARE, M.H., LL.D.	<i>President Emeritus</i>
	Res 90 Commonwealth Ave., Boston
EVERETT AVERY CHURCHILL, A.B., Ed.D.	<i>Vice President of the University</i>
Office 138 West Building	Res. 48 Long Ave., Belmont
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Office 115 West Building	Res. 3 Preble Gardens Rd., Belmont

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WILFRED STANLEY LAKE, A.B., M.A., Ph.D.	<i>Dean of the College</i>
Office 452 East Building	Res. 69 Columbus St., Newton Hlds.
HAROLD WESLEY MELVIN, A.B., M.A.	<i>Dean of Students</i>
Office 256 West Building	Res. 44 Houston Ave., Milton
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Office 253 West Building	Res. 136 Dickerman Rd., Newton Highlands
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Office 254 West Building	Res. 23 Hardy Ave., Watertown
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	Telephone: Mystic 6148-M
WILLIAM CROMBIE WHITE, S.B., Ed.M.	<i>Executive Secretary</i>
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MYRA EDNA WHITE	<i>Librarian</i>
Library, East Building	Res. 118 Hemenway St., Boston
HENRY ARTHUR KONTOFF, M.D.	<i>College Physician</i>
Office 479 Beacon Street, Boston	Res. Overlook Park, Newton Centre

Instructing Staff

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Office 463 East Building	Res. 122 Downer Ave., Hingham
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Office 350 East Building	Res. 53 Harley Ave., Everett
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Office 246 West Building	Res. 20 Martin St., Cambridge
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Assistant Professor of Co-ordination
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Office 355 West Building	<i>Head Coach of Hockey and Baseball</i>
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Gymnasium Office, East Building	<i>Instructor in Physical Education</i>
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Office 355 West Building	<i>Instructor in Chemistry</i>
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Office 100 South Building	<i>Instructor in Biology</i>
	Res. 20 Pierce Place, Canton

Graduate Assistants

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Office 246 West Building	Res. 440 Summer St., Lynn
LAURENT OSCAR DUBOIS, S.B.	<i>Graduate Assistant in Chemistry</i>
Office 425 West Building	Res. 1200 Great Plain Ave., Needham
MARIO GIELLA, S.B.	<i>Graduate Assistant in Chemistry</i>
Office 425 West Building	Res. 52 Hull St., Boston
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Office 351 East Building	Res. 339 Lakeside Drive, Bridgewater
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Office and Secretarial Staff

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Secretary to the Treasurer of the University—116W	
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Secretary to the Purchasing Agent—117W	

MARJORIE ELIZABETH BUNKER	38 Lakewood Rd., Newton Hlds.
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Assistant Treasurer—115(A)W	
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Admissions Office—151W	
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EDNA JANE GARRABRANT	8 Maynard St., Arlington
Secretary to the Director of Co-operative Work—253W	
ELSIE HINCKLEY HUNT	100 Linden St., Allston
Secretary to the Director of Admissions—150W	
BARBARA KNIGHT	254 Clifton St., Malden
Secretary to the Dean—452E	
HELEN LOUISE KOLDERUP	14 Holden Rd., Belmont
Cashier, Treasurer's Office—115W	
FLORENCE MASKELL	42 Brush Hill Rd., Milton
Co-operative Work Office—253W	
DOROTHY BRETT MASON	15 Wenham St., Jamaica Plain
Registrar's Office—254W	
DOROTHY MILNE MURRAY	204 Fair Oak Park, Needham
Secretary to the Director of Student Activities—355W	
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Bookkeeper, Treasurer's Office—115W	
MYRL ALBERTA ORCUTT	99 Hemingway St., Winchester
Admissions Office—151W	
CAROLINE FRANCES PETTINGELL	1654 Massachusetts Ave., Cambridge
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Office of the President—152W	
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Secretary to the Executive Secretary—153W	
GRETCHEN DOUGLASS RANDALL	48 Milk St., Newburyport
Registrar's Office—254W	
JESSIE PAINE RHODES	2 Perkins Sq., Jamaica Plain
Secretary to the Registrar—254W	
PRISCILLA SPEARE	69 Pelham St., Newton Ctr.
Secretary to the Dean of Students—256W	
RUBY KATHLEEN SWEETLAND	139 College Ave., Somerville
Student Activities Office—355W	
JEANETTE THAYER	4 Hamilton Rd., Waltham
Co-operative Work Office—253W	
MARY DIXON TURNER	163 Forest St., Melrose
Student Union Office—357W	
GRACE LISCOM WATKINS	76 Glendale St., Dorchester
Assistant Librarian—Library, East Building	
MARGARET MARY WEIR	41 Stewart St., Quincy
Admissions Office—151W	
CYNTHIA WORTH	82 Thorndike St., Brookline
Assistant Librarian—Library, East Building	
LOUISE WORTHEN	127 Youle St., Melrose
Admissions Office—150W	

Convocation Lecturers

THORNTON W. BURGESS

AUTHOR

"Learning from the Wild"

J. ANTON DE HAAS

PROFESSOR OF INTERNATIONAL RELATIONSHIPS, HARVARD UNIVERSITY

"Where Do We Go From Here?"

LLOYD C. DOUGLAS

AUTHOR, LECTURER

"Experiences of an Author"

H. V. KALTENBORN

AUTHOR, NEWS COMMENTATOR

"Kaltenborn Edits the News"

JAMES M. LANDIS

DEAN, HARVARD UNIVERSITY LAW SCHOOL

"The Securities and Exchange Commission"

HENRY CABOT LODGE, JR.

UNITED STATES SENATOR FROM MASSACHUSETTS

"The National Outlook"

HARRY A. OVERSTREET

HEAD, DEPARTMENT OF PHILOSOPHY AND PSYCHOLOGY

COLLEGE OF THE CITY OF NEW YORK

"Ten Ways to Reach Wrong Conclusions"

G. BROMLEY OXNAM

BISHOP, METHODIST EPISCOPAL CHURCH

"A Date with the World"

J. EDGAR PARK

PRESIDENT, WHEATON COLLEGE

"The Secret of Success"

JAMES H. POWERS

OF THE BOSTON GLOBE EDITORIAL STAFF

"The Engineer in the New World"

HARLOW SHAPLEY

ASTRONOMER, LECTURER

"What Makes the Stars Shine"

RALPH W. SOCKMAN

MINISTER, CHRIST CHURCH, NEW YORK CITY

"The New Patriotism"

ALLEN A. STOCKDALE

EDITOR, CLERGYMAN, LECTURER

"The Future of America"

MAURICE J. TOBIN

MAYOR OF BOSTON

"City Government"

EDWARD A. WEEKS, JR.

EDITOR, THE ATLANTIC MONTHLY

"An Editor Faces an Angry World"

Chapel Preachers

DR. CHARLES N. ARBUCKLE
MINISTER, FIRST BAPTIST CHURCH, NEWTON

DR. RICHARD H. BENNETT
MINISTER, PAYSON PARK CHURCH, BELMONT

DR. EDWIN PRINCE BOOTH
PROFESSOR OF CHURCH HISTORY, BOSTON UNIVERSITY SCHOOL OF THEOLOGY

REVEREND ROBERT WOOD COE
MINISTER, LEYDEN CONGREGATIONAL CHURCH, BROOKLINE

DR. FRANK E. DUDDY
MINISTER, NORTH CONGREGATIONAL CHURCH, CAMBRIDGE

RABBI LOUIS M. EPSTEIN
RABBI, TEMPLE KEHILLATH ISRAEL

DR. NEWTON C. FETTER
MINISTER TO BAPTIST STUDENTS IN GREATER BOSTON

DR. C. LESLIE GLENN
MINISTER, CHRIST CHURCH, CAMBRIDGE

REVEREND WILLIAM H. GYSAN
MINISTER TO UNITARIAN STUDENTS IN GREATER BOSTON

DR. CHARLES W. HAVICE
EXECUTIVE SECRETARY, NORTHEASTERN STUDENT UNION

DR. ARTHUR L. KINSOLVING
MINISTER, TRINITY CHURCH, BOSTON

REVEREND CARL H. KOPF
MINISTER, MOUNT VERNON CHURCH, BOSTON

DR. ASHLEY D. LEAVITT
MINISTER, HARVARD CONGREGATIONAL CHURCH, BROOKLINE

DR. ELMER A. LESLIE
PROFESSOR OF HEBREW AND OLD TESTAMENT LITERATURE, BOSTON UNIVERSITY

DR. BOYNTON MERRILL
MINISTER, SECOND CHURCH, NEWTON

REVEREND SAMUEL H. MILLER
MINISTER, OLD CAMBRIDGE BAPTIST CHURCH, CAMBRIDGE

DR. PHILLIPS E. OSGOOD
MINISTER, EMMANUEL CHURCH, BOSTON

FATHER THOMAS R. REYNOLDS
PRIEST, ST. MATTHEW'S CHURCH, DORCHESTER

THE RT. REVEREND HENRY KNOX SHERRILL
BISHOP, EPISCOPAL CHURCH

DR. FRANCIS L. STRICKLAND
PROFESSOR OF THE HISTORY AND PSYCHOLOGY OF RELIGION, BOSTON UNIVERSITY

DR. G. CAMPBELL WADSWORTH
MINISTER, CHURCH OF THE COVENANT, BOSTON

Northeastern University

General Statement

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the

New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools — the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the Evening Division of the

College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The Evening Division of the College of Liberal Arts offers an evening program the equivalent in hours to one-half of the requirements for the A.B. or B.S. degree, providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

Northeastern University and Affiliated Schools

Statistical Summary

1938-1939

	Administrative Officers and Faculty	Students
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	103	2112
College of Engineering		
College of Business Administration		
School of Law	50*	1461*
School of Business	105*	1550*
Evening Division, College of Liberal Arts	4**	33**
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Technical Institute	38	532
Lincoln Preparatory School	19	437
Huntington Day School for Boys		
Regular Term	16	171
Summer Term	10	146
	<hr/>	<hr/>
Total	353	6442
Less Duplicates	42	403
	<hr/>	<hr/>
	311	6039

*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

**The Evening Division of the College of Liberal Arts admitted students for the first time in September 1938.

The Co-operative Plan

How It Works

THE co-operative plan works in the following manner. Upperclassmen are divided into two nearly equal groups, one of which is called Division A and the other Division B. Each man is assigned a job with some business or industrial concern. So far as possible each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. In September the Division A student returns to the University for ten weeks of classroom work. At the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year so that an upperclassman has annually twenty weeks at college, twenty-six weeks at co-operative work, and six weeks of vacation.

Faculty Co-ordinators

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in an agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

Placement

The co-ordinator visits co-operative firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide,

including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

Supervision and Guidance

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by common agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which shall afford the student practical experience, give meaning to his program of study, and train him in reliability, efficiency, and team work.

Correlation of Theory and Practice

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for *at least one year* after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class do remain with their co-operating employers after graduation.

Co-operative Work Reports

The values to be derived from the practical experiences are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

Co-operative Work Records

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

Positions Available

Because of uncertainties of business conditions, as well as other reasons beyond its control, the University cannot and does not guarantee to place students. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups and students who are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

Earnings

The rates of pay for students tend to be low because students are given the privilege of attending college on the Co-operative Plan and because effort is made to provide the student with the opportunity of being transferred, at reasonable intervals, from one department to another of the co-operating company. It should be understood that the primary purpose of the Co-operative Plan is training.

The minimum rates of pay will be governed to a very large extent by prevailing wages-and-hours laws. To assist the student in budgeting his expenses, however, the following scale of wages may be considered as minimum rates received by students in times of normal business.

\$12 per week for second year students

\$14 per week for third year students

\$16 per week for fourth and fifth year students

Statistical records show that the pay actually received by students averages appreciably above these figures.

Location of Work

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

Types of Co-operative Work

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament, and other personal

qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.

For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering firms, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

Typical Co-operative Training Schedules

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

BOSTON & MAINE RAILROAD CO.

- ONE YEAR — Erecting Shop
- ONE YEAR — Machine Shop
- ONE YEAR — General work in Machine Shop and Erecting Shop
- ONE YEAR — Mechanical Engineer's Dept.

BOSTON EDISON COMPANY

The schedule of the Boston Edison Company is divided into the following general classifications. Very few co-operating students obtain experience in all branches, but students progress from year to year in the respective branches as conditions require.

Standardizing

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

Steam Practice

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

Electrical Testing

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

Chemical Engineering

- (a) Fuel analysis
- (b) Miscellaneous tests and analysis of oils, water paints, and other materials

*Photography**Office Work*

HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

Pyrometry

Use and care of Metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.

ONE YEAR Keeping of general metallurgical records, filing, and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

PEPPERELL MANUFACTURING COMPANY

ONE YEAR Stock Records

ONE YEAR Production Analysis

ONE YEAR Inventory Control

General Information

Tuition

THE tuition for all curricula in the Day Division is \$250 per year, or \$125 per term. Certain fees and deposits are also required as specified in the following paragraphs. A complete statement of tuition and fee payments is given on page 26.

Students who carry academic loads of greater or less than normal amount may pay their tuition on a semester hour basis.

General Library and Materials Fee

All students are charged a general library and materials fee of fourteen dollars *(\$14) each year. This fee is payable at the time of registration and is included in the schedule of payments on page 26.

Student Activities Fee

Each student in the Day Division is charged a student activities fee of sixteen dollars (\$16). This fee is payable at the time of registration and is included in the schedule of payments on page 26. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, *The Northeastern Student Union* and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. If the student shows signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

Chemical Laboratory Deposit

(Applies only to students taking chemical laboratory work)

All students taking chemical laboratory work are required to make a deposit from which deductions are made for breakage, chemicals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the end of the college year. If the charge for such breakage, chemicals, or destruction of apparatus is more than the sum deposited, the student will be charged the additional amount.

Freshmen make a chemical laboratory deposit of ten dollars with their first tuition payment at the beginning of the year; upperclassmen make a chemical laboratory deposit of ten dollars (\$10) at the beginning of each term.

*This fee is twelve dollars (\$12) for students who were enrolled in the Day Division prior to January 1, 1940.

Schedule of Payments for Freshmen

<i>Date Due</i>	<i>Amount</i>	
*September 5, 1940	Tuition	\$125.00
	Fees	30.00
		<hr/>
		\$155.00
February 3, 1941	Tuition	\$125.00

Schedule of Payments for Upperclassmen

<i>Division A</i>		
*September 9, 1940	Tuition	**\$125.00
	Fees	28.00
		<hr/>
		\$153.00
*January 27, 1941	Tuition	\$125.00
<i>Division B</i>		
*November 18, 1940	Tuition	**\$125.00
	Fees	28.00
		<hr/>
		\$153.00
*April 7, 1941	Tuition	\$125.00

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Director of School Administration.

Graduation Fee

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid before the end of the seventh week of the second term in the senior year.

Payments

All payments should be made at the treasurer's office. Checks should be made payable to Northeastern University.

*Students taking chemical laboratory work pay a deposit of \$10.00 additional.

**This tuition payment is \$100 instead of \$125 for all upperclassmen enrolled in the College prior to September 1, 1938.

Refunds

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except when students are compelled to withdraw on account of personal illness.

Expenses

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

Estimated College Expenses for a Freshman

Application Fee.....	\$ 5.
Tuition.....	250.
General Library and Materials Fee.....	14.
Chemical Laboratory Deposit.....	10.
Student Activities Fee.....	16.
Books and Supplies.....	35.
	<hr/>
	\$330.

(Engineering students should add approximately \$25 for drawing instruments and equipment.)

Estimated Living Expenses Per Week for a Freshman Residing Away from Home

Room Rent.....	\$ 3.75
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	<hr/>
	\$13.75

The figures given above are approximate and may not exactly apply to any one student; however, they will be found to represent fairly well the expense of a freshman who lives comfortably but without extravagance.

Textbooks and Supplies

The Northeastern University Bookstore, located in the Basement of the West Building, is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

A Northeastern Bookstore Discount Card will be issued to every Day Division student at the time of registration and will entitle him to a ten per cent discount on all Day Division textbooks which he purchases for his own use while in school.

The ten per cent discount will not apply on equipment, supplies or novelties. It will be the policy of the bookstore, however, to stock these materials and to sell them at the lowest possible prices.

Part-Time Work

Students who find it necessary to accept part-time jobs while attending college may obtain such work through the Director of Co-operative Work.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.

Examinations

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations will be given in all subjects during the week of July 7, 1941, for Division A students, and the week of September 1, 1941, for Division B students. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only by vote of the Administrative Committee, and for all such examinations the University requires the payment of a special fee of five dollars (\$5).

Grades

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work towards the Bachelor's degree)

- F failure, removable by condition examination
- FF complete failure (course must be repeated in class)
- I incomplete, used for intermediate grades only to signify that the student has not had time to make up work lost through excusable enforced absence from class
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student, who is required to ascertain when and how the condition can be removed.

Dean's List

A Dean's List, issued at the end of each term, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshman who achieve high scholastic standing are included on a Freshman Honor List, which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

Report Cards

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each term. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain an acceptable quality of college work. Parents and students are always welcomed by the college officers and faculty advisers for conference upon such matters.

Parents or guardians will be notified whenever students are advised or required to withdraw from the University.

Conduct

It is assumed that students come to the University for a serious purpose and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University or persistent neglect of work may be followed by dismissal; if the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

Scholastic Year for Seniors

Seniors of either division who are candidates for a degree in the current year must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

Attendance

Students are expected to attend all exercises in the subjects they are studying unless excused in advance. Exercises are held and students are expected to devote themselves to the work of the University between 9:00 A.M. and 5:00 P.M., except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9:00 A.M. and 1:00 P.M.

No cuts are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. If he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

Housing Regulations

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Director of School Administration, 254W.
3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Director of School Administration to change.
4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments.
5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.
6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

Residence

It has been found to be much more satisfactory for the student to live within easy access of Boston, especially during periods in college, than to live out twenty-five or thirty miles. The saving of time and effort more than offsets any increased expense. Residence in Boston is advisable, as it gives the student opportunity to use the college facilities outside of class hours and to confer more easily with his instructors about his college work.

Dormitories

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue., Boston, Massachusetts.

Buildings and Facilities

Boston—A Great Educational Center

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students.

Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

Location of University Buildings

The Day Division of Northeastern University is housed in three buildings located on Huntington Avenue, Boston, just beyond Massachusetts Avenue and opposite the historic Boston Opera House. The main administrative offices of the University are located in the West Building, a four-story brick structure added to the physical plant of Northeastern in 1938.

Transportation

The chief railroad centers of Boston are the North and South Stations. From the North Station board a car going to Park Street, at which junction transfer to any Huntington Avenue car. At South Station board a Cambridge subway train for Park Street Under. There change to a Huntington Avenue car and alight at the West Building of Northeastern University.

West Building

The West Building contains over 100,000 square feet of floor space for administrative and instructional purposes. In the basement are the Mechanical Engineering offices, laboratories, and machine shops; the University Bookstore; the Husky Hut, where light refreshments are sold; several classrooms; and a large drafting room used chiefly by the Department of Mechanical Engineering. Ample area is also provided in the basement for a student check room, lockers, and various storage rooms and vaults.

On the first floor are located the President's office, the General Offices of the Secretary-Treasurer, and the offices of the Vice-President of the University. A large public reception room adjoins the main lobby, and several small classrooms are located in both wings of the building. This floor was given to the University in memory of Lieutenant Stafford Leighton Brown by his mother.

The Department of Physics has a suite of offices, laboratories, and research areas in the south wing of the second floor. A large lecture hall with raised seats accommodating over three hundred people occupies the central area of the second floor. This room is fully equipped for both lantern slide and motion picture projection, and is provided with up-to-date motor driven ventilating equipment. The room is fitted with a lecture demonstration desk having all necessary accessories including gas, water, various types of electricity, and hoods for the removal of gases. A fully stocked preparation room adjoins this lecture hall. The offices of the Director of School Administration, the Director of Co-operative Work, and the Dean of Students, a large number of small classrooms, and several conference rooms complete the layout of the second floor.

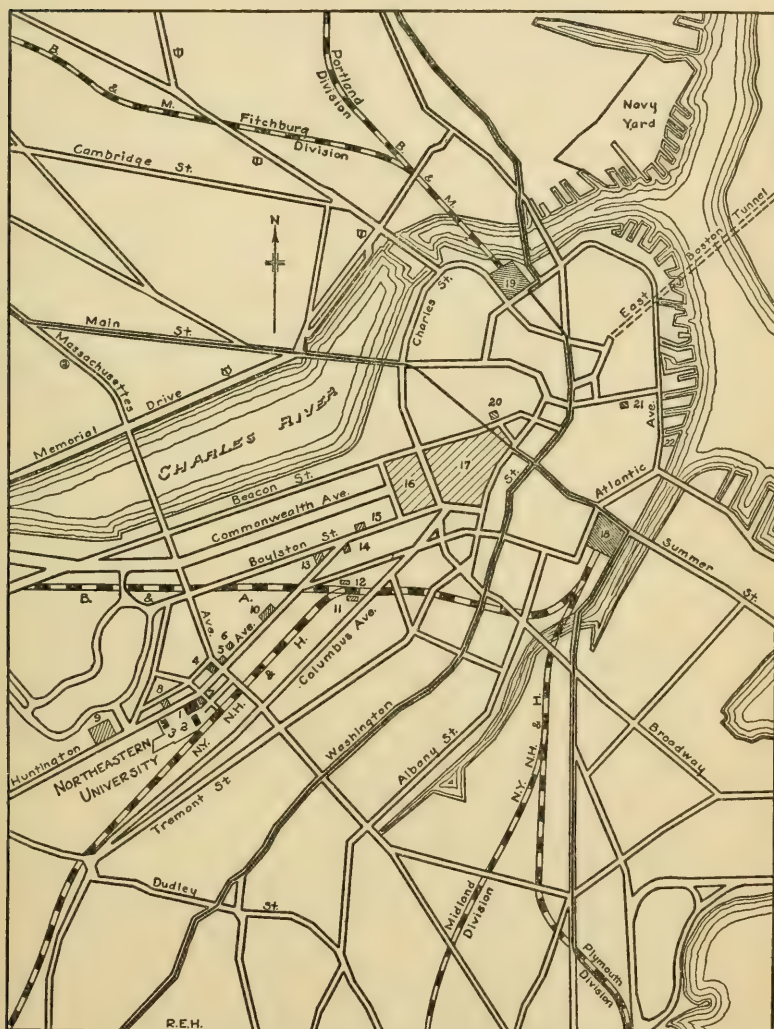
Student lounging and recreation rooms sponsored by the Northeastern Student Union occupy the Huntington Avenue side of the third floor, together with the offices of the Department of Student Activities. This floor also contains a small University Chapel, a lecture hall similar to that on the second floor but slightly smaller, and a number of large classrooms equipped with special tables for freshman drawing classes.

A group of large, fully equipped laboratories for Inorganic Chemistry and Qualitative Analysis, Physical Chemistry and Quantitative Analysis, and Organic Chemistry occupy the principal areas of the fourth floor. The Chemistry Department has its offices and a large lecture hall equipped especially for courses in chemistry adjoining these laboratories. A number of research areas for special purposes, a large central stockroom, a dark room, and several balance rooms complete the chemistry suite. Three large drafting rooms having blackboards especially equipped with sliding T-squares, an Art Room, and the offices of the Drawing Department, are also found on the fourth floor.

In the penthouse on the roof there are a faculty-alumni lounge, a radio laboratory, and an astronomy laboratory.

South Building

The South Building of Northeastern University comprises a basement and two stories. The Department of Electrical Engineering occupies the entire basement with its offices, Dynamo Laboratories, High Tension Laboratory, Electrical Measurements Laboratory, Instrument Room, and research areas.



MAP SHOWING NORTHEASTERN UNIVERSITY AND VICINITY

*Key to Map**Northeastern University and Vicinity*

1. EAST BUILDING
2. SOUTH BUILDING
3. WEST BUILDING
4. SYMPHONY HALL
5. HORTICULTURAL HALL
6. CHRISTIAN SCIENCE CHURCH
7. NEW ENGLAND CONSERVATORY OF MUSIC
8. BOSTON OPERA HOUSE
9. BOSTON MUSEUM OF FINE ARTS
10. MECHANICS EXHIBITION HALL
11. BACK BAY STATION
12. TRINITY PLACE
13. BOSTON PUBLIC LIBRARY
14. TRINITY CHURCH
15. MUSEUM OF NATURAL HISTORY
16. BOSTON PUBLIC GARDEN
17. BOSTON COMMON
18. SOUTH STATION
19. NORTH STATION
20. STATE HOUSE
21. U. S. CUSTOMS HOUSE
22. ROWES WHARF

On the first floor are located the Departments of Civil and of Industrial Engineering. A Hydraulics and Sanitary Engineering Laboratory, a Methods Engineering Laboratory, a Civil Engineering drafting room, and several classrooms complete the layout of this floor. A large lecture room, several classrooms, the Chemical Engineering Unit Operations Laboratory, the Chemical Engineering Department Offices, and the Biology Laboratory are located on the second floor.

East Building

The East Building of Northeastern University is the educational wing of the Huntington Avenue Branch of the Boston Y.M.C.A. On its second floor are located the library, a branch library and reading room, and several classrooms. The third floor contains the office of the Dean of Business Administration, several departmental offices, a laboratory for statistical work, and additional classrooms. On the fourth floor are located the office of the Dean of Liberal Arts, the Department of English, the Department of Modern Languages, several large lecture rooms, and a Student Union Reading Room.

Jacob P. Bates Hall, located in the East Building, has a seating capacity of 400. The hall is equipped with a motion picture machine and has a large stage suitable for entertainments of various kinds.

Bates Hall is an important center for various student activities. Here the band and the orchestra have their rehearsals, the glee club gives its entertainments, and some of the dramatic work is presented. Numerous student socials and small group dinners frequently are held here.

Natatorium

The swimming pool, 75 feet long by 25 feet wide, is supplied with filtered water and is heated to the proper temperature by an elaborate system of pipes. It is one of the finest of its kind in New England.

Gymnasium

This structure, the funds for which were provided by the relatives of the late Samuel Johnson, is known as the Samuel Johnson Memorial Gymnasium. The gymnasium provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, and electric cabinet baths.

Lecture Assembly Halls

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

Equipment for Physical Training

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining the West Building is a large field equipped for athletics. Here are two tennis courts, an outdoor gymnasium, a rifle range, a baseball cage, jumping pits, and a track with a 100-yard straightaway.

Huntington Field

Northeastern University owns and operates a large athletic field a short distance from the University. This field, known as the Huntington Field, provides ample facilities for track, baseball, football, and other outdoor sports. A bus service maintained between the field and the University makes it possible for students to get back and forth with a minimum loss of time. A new and commodious field house has recently been erected at the field as well as ten sections of stadium seats capable of seating 2,000 spectators.

Design and Drafting Rooms

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

Libraries

The library service of Northeastern University comprises the following units:

1. The Main Library, located on the second floor of the East Building, includes three reading rooms in which are available all of the general reference books, many of the professional and scientific volumes, and all of the periodicals (approximately 100) to which the University subscribes. This library is under the direction of a librarian and two assistants, all of whom have had special training for the work. Main library hours are as follows:

9:00 A.M.	to	10:00 P.M.	Daily
2:00 P.M.	to	9:00 P.M.	Sundays
12:00 M	to	9:00 P.M.	Holidays

2. The Branch Library, also located on the second floor of the East Building, houses most of the books on engineering and management with the exception of those in the field of chemical engineering, which, for greater convenience of students in this department, are kept in the Main Library. The Branch Library is in charge of a corps of student assistants and is open from 8:45 A.M. to 5:15 P.M. daily except Sundays. Students have access directly to the shelves which contain books on reserve for particular courses as well as general reference works.

3. A general reading room and library is maintained by the Northeastern Student Union in Room 356, West Building. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc., among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

Boston Public Library

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

Student Activities

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth-while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with *excessive* devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact, some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities, for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

Athletic Association

All students in the Day Division are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities appointed by the vice-president in charge of the Day Division. This committee decides what students are eligible to

participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as *ex officio* members.

The University maintains both varsity and freshman teams in basketball, baseball, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.

Tennis Club

The Northeastern University Tennis Club is open to all undergraduates. The Department of Student Activities appoints a faculty adviser who assists the members in conducting an intramural tennis tournament. Excellent facilities for tennis are afforded on the courts adjacent to the East Building of the University. In the early spring members of the Tennis Club have access to the gymnasium for indoor practice.

Mass Meeting

The hour from 12:00 to 1:00 on Wednesdays throughout the year is set aside for mass meetings. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers for the year will be found on page 11 of this catalogue. When the mass meeting hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

"The News"

A college newspaper, the *Northeastern News*, is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the *News* staff and promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The *Northeastern News* is a member

of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the *News* are mailed to upperclassmen when they are at co-operative work and to freshmen after the close of their college year.

"The Cauldron"

The senior class publishes annually a college year book, *The Cauldron*. It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

The Handbook

Each fall the Northeastern Student Union issues a conveniently sized student *Handbook*, which is sold to students at a nominal price. The book contains information about the various college clubs, athletic programs, fraternities, rules governing freshmen, lockers, publications, and so on. The *Handbook* also includes a diary for the college year in which it is issued.

Student Council

Student government of the Day Division at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject to faculty approval, over all such matters as customs, privileges, campus regulations, etc. and meets regularly to consider and act upon issues referred to it for decision. The Dean of Students serves as faculty adviser to the Student Council.

Honor Societies

Three honorary societies are chartered by the University in its Day Division:

The Senate, in the College of Engineering.

The Sigma Society, in the College of Business Administration.

The Academy, in the College of Liberal Arts.

Election to the college honorary fraternity is founded primarily upon scholarship, but before a man is privileged to wear the honorary society insignia he must give evidence of an integrity of character and an interest in the extra-curricula life of the Uni-

versity as well as an acceptable personality. The Societies have memberships consisting of the outstanding men in the Day Division. Election to the honorary society is the highest honor that can be conferred upon an undergraduate.

Fraternities

There are at present ten local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- | | |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma | 6. Phi Beta Alpha |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi |
| 3. Eta Tau Nu | 8. Sigma Phi Alpha |
| 4. Nu Epsilon Zeta | 9. Kappa Zeta Phi |
| 5. Sigma Kappa Psi | 10. Gamma Phi Kappa |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

Professional Societies and Clubs

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored.

Accounting — Law Club

All students interested in accounting and law are invited to join this stimulating club. Problems and cases involving the interrelations of accounting and law are presented and discussed at club meetings. Although upperclassmen usually present problems arising out of thesis or co-operative work, speakers from the professional world come to the meetings to present papers and lead the student discussion.

Banking Club

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the College of Business Administration, is eligible to active membership in this club. Meetings are held each ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field of banking.

National Engineering Societies

Students in the several professional curricula of the College of Engineering operate Northeastern University Sections of the appropriate national engineering societies. Chief among these are the following:

American Society of Mechanical Engineers
Boston Society of Civil Engineers
American Institute of Chemical Engineers
American Society for the Advancement of Management
American Institute of Electrical Engineers

Members of the engineering faculty who hold membership in the parent organizations serve as advisers to these student groups. Meetings are held regularly, usually at night so that students from both Divisions may attend, and practicing engineers are invited to address the Section. Occasionally appropriate motion pictures are shown, or the group visits some current engineering project in the vicinity of Boston. The College of Engineering encourages these student sections of the technical societies in the belief that they provide a wholesome medium for social intercourse as well as a worth-while introduction to professional life.

Affiliated Engineering Societies of New England

Membership in the student sections of the Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Affiliated Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides very valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

International Relations Club

The International Relations Club was founded in 1932 for the purpose of studying and discussing those current national and international events and issues which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upper-classmen who maintain good scholarship.

Astronomy Club

Membership in the Astronomy Club is open to all students in the College of Engineering who maintain satisfactory scholastic standing. The club has access to machine shops for the construction of telescopes and other instruments. It also has quarters in the penthouse on the fifth floor of the West Building. Meetings are held twice a month for the purpose of making astronomical observations and carrying on appropriate discussions.

Debating Society

The purpose of the Debating Society, formed in 1936, is "to foster and promote an interest and facility in formal argumentation; to develop an impartial, unbiased, and intellectual consideration of questions and issues of current interest; and to sponsor intercollegiate relationships and competition in the debating field." Membership is open to all students of the Day Division.

Radio Club

One of the most popular undergraduate activities is the Northeastern University Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Radio Laboratory in the penthouse of the West Building. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings, when students in both divisions may attend.

Dramatic Club

Students interested in dramatics have an opportunity to cultivate this art under faculty coaches who co-operate with the Dramatic Club in the production of several pieces in the course of each college year. Frequently the Northeastern Dramatic and Glee Clubs collaborate with those of Simmons College in light operas such as those of Gilbert and Sullivan.

Rifle Club

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting. Those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

Musical Clubs

The Department of Student Activities sponsors the following musical clubs: an orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Division. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Camera Club

The Camera Club welcomes all men interested in photography. Weekly discussions and special evening lectures by guest artists are part of the yearly program. Field trips, monthly photo contests and a general exhibition add to the interest and progressive work of this organization.

Mathematics Society

The Mathematics Society encourages the study of topics of mathematical interest which are either outside or beyond the scope of the regular mathematics courses. Membership is restricted to those men who have completed one and one-half years of study in mathematics and have an average grade of not less than "C" in mathematics courses up through differential calculus. The club meets once every five weeks in the evening. Although membership is limited to upperclassmen, any student is always welcome to any meeting, and freshmen especially interested in mathematics are always welcome.

The final program of the year is devoted to a dinner meeting for which some prominent outside speaker is procured.

Class Organization and Activity

Each of the Classes in the Day Division elects its officers and carries on activities as a class. Dances are sponsored by the classes at regular periods throughout the year. One of the high lights of the social program is the Junior Promenade, held each spring at one of the Boston hotels.

Seniors plan a whole week of activities just prior to Commencement in June.

Freshmen are required to wear the red and black cap distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

The Northeastern Student Union

The purpose of the Northeastern Student Union is to carry out the work of a Christian association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra-curricula work.

The Union conducts a weekly Chapel Service in the little chapel in the West Building, to which all faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8:40 to 8:55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

Awards and Prizes

Public Speaking Contest

Each spring the University conducts a Public Speaking Contest for which all students in the Day Division are eligible. Prizes of fifty, twenty-five, fifteen, and ten dollars respectively are awarded to the four ablest speakers at a general mass meeting of the student body.

Speeches are original in nature and about ten minutes in length. The judges base their decision on appropriateness of subject, content, and delivery. Preliminary contests are held during the winter in each division.

Alcott Award

In 1934 the William Jefferson Alcott, Jr. Memorial Fund was established by the faculty and other friends to perpetuate the memory of Professor Alcott who was a member of the Department of Mathematics in Northeastern University from 1924 until his death in 1933.

Each year the income from this fund is used for a suitable award to the Northeastern University Day Division student who has made some outstanding academic achievement during the preceding year. The recipient of the award is chosen by a committee elected by the faculty.

Alumni Association

The alumni of the Day Division are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

Among the events sponsored by the Alumni Association are the annual meeting and reunion; the annual alumni-varsity basketball game; and class reunions. The Association also awards a track trophy each year and contributes to the Alumni Student Loan Fund.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

Officers of the Alumni Association

President

LINDSAY ELLMS '23

Vice President

GEORGE A. MALLION '20

Secretary

EARL H. THOMSON '25

Treasurer

WILLIS P. BURBANK '31

Executive Committee

FARNHAM W. SMITH '24

RAYMON D. TELLIER '28

JOHN W. GREENLEAF, JR. '30

GEORGE DAVENPORT '28

JAMES W. DANIELS '25

Alumni Executive Secretary

RUDOLF O. OBERG '26

Alumni Council Representatives

1913-1920 JOHN R. McLEISH

1929—HAROLD L. BURTON

HARRY J. FREEMAN

1930—DEXTER W. LOVELL

PERRY F. ZWISLER

ALEXANDER G. MACGREGOR

1921—ROGER E. SPEAR

1931—DONALD H. MACKENZIE

1922—RICHARD B. BROWN

1932—SIDNEY A. STANDING

1923—THOMAS A. STEVENS

1934—J. LLOYD HAYDEN

1924—FARNHAM W. SMITH

1935—HARTWELL G. HOWE

1925—RENE G. MAURETTE

1936—FREDERIC S. BACON, JR.

1926—EARL L. MOULTON

1937—JOHN F. SHEA

1927—RUDOLPH A. LOFGREN

1938—CHESLEY F. GARLAND

1928—WILLIAM E. R. SULLIVAN

THE COLLEGE OF LIBERAL ARTS

Aims and Methods

THE Northeastern University College of Liberal Arts aims to instruct men in the art of living and to lay down a systematic foundation of knowledge upon which, as graduates, they may continue with more specialized training, either by formal graduate study or by independent learning and experience.

Liberal as this program is, however, it develops for the student genuinely practical values. The student is encouraged from the beginning of his freshman year to consider the problem of his future vocation, to select courses having the most useful bearing on his intended life-work, and to take advantage of opportunities for practical experience in his chosen field.

Through the Northeastern plan of co-operative education for upperclassmen, the student makes early contact with actual working conditions and profits by the wholesome experience of earning at least part of the money to defray his own college expenses. Viewed as a whole, then, his college years surround him not with an artificial atmosphere of cloistered scholarship but with an environment very close to that which he will enter after graduation. Having completed his course, if he has made good use of his opportunities, he will be mentally capable and, what is no less important, readily employable.

The Elective System

So that each student may plan a college program to suit his own interests and aptitudes and to prepare him for the work he intends to take up after graduation, a wide range of elective courses is offered. This does not mean that students are free to select courses indiscriminately. A definite series of basic courses in each program of instruction is required by the faculty, in order that every student may be insured a proper foundation in his major field. These required courses are largely concentrated in the first two years of the curriculum.

Throughout the college course the problem of the student's vocational future is emphasized by the adviser. Together the adviser and student consider possible careers open to the student. If the latter expects to pursue graduate or professional studies, he is guided in a choice of courses which will best prepare him for his advanced work. If the student must begin to earn his livelihood immediately after graduation, the various fields open to him are carefully considered in the light of his ability and inclination.

Students who plan to enter professional schools are urged to familiarize themselves with the requirements for admission to the particular schools in which they are interested.

Those students who wish to enter business directly after graduation from the College of Liberal Arts may take courses offered in the Northeastern University College of Business Administration for which they have the necessary prerequisites, provided they fulfill all the curricular requirements of the College of Liberal Arts in regard to freshman courses, language courses, and major and minor fields.

Admission Requirements and Freshman Programs

Applicants for admission to the freshman class without restrictions must qualify by one of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.

2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.

3. Examinations.

(Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

Prescribed Subjects for Admission

College of Liberal Arts

The College of Liberal Arts offers courses leading either to the A.B. or to the S.B. degree. According to the degree which he expects to receive, the student will present for admission one or the other of the groups of prescribed subjects listed below.

<i>A.B. Curriculum</i>		<i>S.B. Curriculum</i>	
	Units		Units
English	3	English	3
Foreign Language (Ancient or Modern)	3	†Mathematics	2 or 3
Social Studies	2	Natural Science	1
*Electives	7	*Electives	8 or 9
Total	15	Total	15

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Committee on Admission reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

†Students expecting to major in chemistry, mathematics, or physics must offer 3 units.

Other Requirements

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along with the formal requirements stated above, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and most important of all — his character, all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

Personal Interview

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Application for Admission

Each applicant for admission is required to fill out an application blank whereon he states his previous education, as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5) is required when the application is filed. This fee is non-returnable.

The last page of this catalog is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to Director of Admissions, Northeastern University, Boston, Mass. Checks should be made out to Northeastern University.

Candidates are urged to visit the office of Admissions for personal interview if it is possible for them to do so before sub-

mitting their applications. Office hours of the Department are from 9:00 A.M. to 4:00 P.M. daily; Saturdays to 12:00 M. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Applications should be filed not later than May first, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

Trustee Scholarships

Each year Northeastern University grants in the College of Liberal Arts a limited number of full tuition scholarships to entering freshmen who have demonstrated, throughout their preparatory or high school course, superior scholarship. For additional information relative to these scholarships, communicate with the Director of Admissions.

Registration

Eligibility for admission does not constitute registration. Freshmen register at the University on September 5, 1940. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have had inadequate preparation in any of his prerequisite subjects, the Faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry. Students admitted to advanced standing are not eligible for placement at co-operative work until they have completed a full year of academic work at the University.

Entrance Condition Examinations in Boston

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the University unless special arrangements are made with the Department of Admissions to administer them elsewhere.

Students are advised to take such examinations on the earliest possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10:00 A.M. to 12:00 M.

1:00 P.M. to 3:00 P.M.

During the current year examinations will be given on the following days: June 5, 1940; August 28, 1940. All other examinations will be given by special assignment.

Freshman Orientation Period

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated preceding the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp is planned particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag in the northern part of Massachusetts is admirably equipped for this purpose, having ample facilities for baseball, basketball, tennis, boating, and swimming. The cost of the two days at camp is nominal and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

Physical Examination

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2).

Freshman Counsellors

At the time of his matriculation each freshman is assigned to a personal counsellor, a member of the faculty, who serves as an interested and friendly counsellor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in counselling work. The aim of the freshman counselling system is primarily to assist students in making an effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Counselling is under the direction of a Dean of Students, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of problem cases.

Individual Attention to Freshmen

Not only is attention given to the problems of the student in connection with his studies, but also the service is extended to include help upon any problem in which advice is needed and desired, the aim being to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, considering his previous school record, his score on the psychological test, and the other factors in his situation. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue to do so. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.

Outline of Freshman Courses

The first year is a period of full time study during which the student must demonstrate his fitness for the program which he has elected. Students who are unsuccessful in the basic courses of the freshman year will not be permitted to continue with their advanced program, but will be advised to change their goal and type of training. In some instances this will mean change to another curriculum at Northeastern; in others, transfer to another institution. *The freshman courses are so arranged as to permit change of objective at the end of the first year with a minimum loss of time.*

Freshman Programs

1. For Liberal Arts students majoring in English, Economics-Sociology, or taking the Pre-Legal program.

No.	Course	S.H.	No.	Course	S.H.
H 1	History of Civilization..	4	H 2	History of Civilization	4
Gv 1	American Government.	3	Gv 2	American Government	3
P 1-A	Survey of Physical Science.....	4	P 2-A	Survey of Physical Science.....	4
E 1-A	English I.....	3	E 2-A	English I.....	3
G 1, F 3, or F 5	German or French.....	3	G 2, F 4, or F 6	German or French.....	3
Ps 1-A	Orientation.....	—	PE 2	Hygiene.....	1
PE 3-4	Physical Training.....	—	PE 3-4	Physical Training.....	—
		17			18

2. For Liberal Arts students majoring in Biology, Chemistry, and Mathematics-Physics.

M 1, M 3	Algebra, Trigonometry.	5	M 4	Analytic Geometry....	5
P 1	Physics I.....	3	P 2	Physics I.....	3
Ch 1	General Chemistry.....	4	Ch 2	Inorganic Chemistry...	4
E 1-A	English I.....	3	E 2-A	English I.....	3
G 1, F 3, or F 5	German or French.....	3	G 2, F 4, or F 6	German or French.....	3
Ps 1-A	Orientation.....	—	PE 2	Hygiene.....	1
PE 3-4	Physical Training.....	—	PE 3-4	Physical Training.....	—
		18			19

Requirements for Graduation

The following requirements must be fulfilled by all candidates for the A.B. or S.B. degree:

1. To be graduated, a student must have completed a total of not less than 125 semester hours of academic work with a degree of proficiency acceptable to the faculty. (One semester hour comprises three clock hours of work per week over a period of from fifteen to eighteen weeks.) Usually this represents one hour of recitation or lecture and two hours of outside preparation. In laboratory work, however, a larger part of the time is given to class work.

College attendance over a five-year period is normally needed to fulfill this requirement, although the work may be completed in four years by students who elect full-time study instead of the co-operative plan for one or more upperclass years. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the A.B. or the S.B. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

2. At least 30 semester hours must be completed in a major field of concentration. Certain courses are required in each field of concentration.
3. From 12 to 16 semester hours must be completed in each of two other fields which are called the minor fields.
4. All candidates for the A.B. degree must offer at least three units of foreign language for admission and complete at least two full year courses in foreign languages in their college programs.
5. All candidates for the S.B. degree must complete at least two full year courses in foreign language in their college programs.
6. Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor or with highest honor. Students must have been in attendance at the University at least two years before they may become eligible for graduation with honor, with high honor, or with highest honor.

Curricula Requirements in Liberal Arts

The following fields of study are approved as fields of concentration, or major fields, in the College of Liberal Arts: biology, chemistry, economics-sociology, English, English (journalism option), and mathematics-physics. Required courses for students majoring in these fields are listed below.

Biology

COURSES IN BIOLOGY: General Zoology, General Botany, Invertebrate Zoology, Vertebrate Zoology, Animal Histology, Physiology, Vertebrate Embryology, History of Biology, Histological Technique, and Genetics.

COURSES IN OTHER FIELDS: fifteen semester hours in chemistry and six semester hours in physics.

Chemistry

COURSES IN CHEMISTRY: Qualitative Analysis, Qualitative Analysis Laboratory, Quantitative Analysis, Quantitative Analysis Laboratory, Organic Chemistry, Organic Chemistry Laboratory, Physical Chemistry, Colloidal Chemistry, Advanced Chemistry. (N.B. Thesis work is strongly recommended for all qualified students.)

COURSES IN OTHER FIELDS: twelve semester hours in physics and six semester hours in mathematics.

Economics-Sociology

COURSES IN ECONOMICS: Economic Principles, Economic Problems, Labor Problems, International Economic Relations, Business Cycles, and Economic Systems.

COURSES IN SOCIOLOGY: Introduction to Sociology, Principles of Sociology, Social Problems, Criminology, The Family, Social Ethics.

COURSES IN OTHER FIELDS: sixteen semester hours in English, psychology and government.

English

COURSES IN ENGLISH: English Literature, American Literature, Shakespeare, 18th and 19th Century Prose, Drama before Shakespeare, Chaucer, 19th Century Poetry, Creative Writing, Great European Writers, and Comparative Drama or History of the Novel.

COURSES IN OTHER FIELDS: sixteen semester hours in the social sciences.

English-Journalism

COURSES IN ENGLISH: English Literature, American Literature, Shakespeare, 18th and 19th Century Prose, Comparative Drama or History of the Novel, Journalism I and Journalism II, Creative Writing.

COURSES IN OTHER FIELDS: sixteen semester hours in the social sciences.

Mathematics-Physics

COURSES IN MATHEMATICS: Differential Calculus, Integral Calculus, Differential Equations, Advanced Calculus, Theory of Equations, and History of Mathematics.

COURSES IN PHYSICS: Physics II, Physics Laboratory, Optics, Sound, and Modern Physics.

COURSES IN OTHER FIELDS: ten semester hours in non-science fields.

Students may elect their minor fields of study after consultation with their faculty advisers. The following subjects are available as minors: biology, education, French, German, history and government, physical education, and psychology. Any of the major fields listed above may also be chosen as minors. Students in the College of Liberal Arts may also elect a limited number of courses from among those offered in other colleges of the Day Division such as advertising, contracts, marketing, industrial management, public administration, finance, accounting, and similar subjects. For a complete statement of admission requirements and freshman programs see pages 48 to 53 of this catalog.

Pre-Legal Curricula

Effective September 1, 1938, by a ruling of the Supreme Judicial Court of Massachusetts, in order to be eligible for examination for admission to the Bar an applicant must have completed certain general educational requirements before beginning his legal education. Briefly, this general education must comprise graduation from a four-year high school and the completion of not less than half of the work accepted for the Bachelor's degree in a college approved by the Board of Bar Examiners.

Two separate programs of pre-legal study, both of which meet one-half of the semester hour requirements for the Bachelor's degree, are offered by the College of Liberal Arts.

One of these curricula is designed for young men who are able to give their full time to college life for the two-year period necessary to complete the pre-legal requirements. It comprises one year of thirty-five weeks and a second year of thirty weeks and is specifically adapted to the needs of full-time students. The

academic work is articulated directly with that of the secondary schools from which these young men have recently been graduated. It is paralleled by a wholesome program of athletics and social activities which contribute much to the development of young college men.

The other pre-legal curriculum is built around the needs of mature employed men and women who can give only part time to college work. While this evening course of study meets the same academic standards and includes the same number of semester hour credits as that offered in the day, less emphasis is given to student activities and the courses of instruction are chosen to meet the needs of adult students. Class attendance three nights a week, forty weeks each year, for three years is needed to cover the curriculum requirements.

Both day and evening curricula lay much emphasis upon the social sciences, English, and history, because of the value of thorough grounding in these fields for the prospective student of law.

On the pages which follow are given the synopses of courses offered in the several curricula of the College. Courses offered in the first semester bear odd numbers, and those offered in the second semester bear even numbers.

The term pre-requisite indicates a course that must be passed by a student before he will be permitted to register for an advanced course.

Freshman courses extend over a full semester of 18 weeks. Upperclass courses are uniformly 10 weeks in length each term.

The University reserves the right to withdraw any course in which there is insufficient enrolment.

Unless otherwise noted all courses meet for three class periods each week.

Biology

PROFESSOR MIROYIANNIS; MR. THOMSON and ASSISTANTS

B 1 General Zoology

An introductory course dealing with the basic principles of zoology. A survey of the main types of animals; their classification, structure, life history, distribution, and economic value. The laboratory work illustrates the lectures.

3 semester hour credits (3 cl., 3 lab.)

B 2 General Botany

An introductory course dealing with the basic principles of botany. A general survey of the more important plant types throughout

the vegetable kingdom; their classification, structure, life history, distribution, and economic value. The fundamentals of plant physiology are stressed. The laboratory work illustrates the lectures.

3 semester hour credits (3 cl., 3 lab.)

B 3 Invertebrate Zoology

This course deals with the comparative development and structure of the organic systems of invertebrate animals as represented by the following phyla: Protozoa, Porifera, Coelenterata, Ctenophora, Platyhelminthes, Nematelminthes, Trochelminthes, and Molluscoidea; their biological and ecological relationships. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2 semester hour credits (2 cl., 3 lab.)

B 4 Invertebrate Zoology

Continues and presupposes course B 3. In this part of the course, the lectures deal with the comparative development and structure of the various organ systems of invertebrate animals as represented by the following invertebrate phyla: Coelhelminthes, Mollusca, Arthropoda, and Echinodermata; their biological and ecological relationships. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2 semester hour credits (2 cl., 3 lab.)

B 5 Vertebrate Zoology

This course deals with the comparative anatomy of the integument; the skeletal, muscular, digestive and respiratory systems of the principal classes of vertebrates. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2 semester hour credits (2 cl., 3 lab.)

B 6 Vertebrate Zoology

Continues and presupposes course B 5. In this part of the course, the lectures deal with the comparative anatomy of the vascular, excretory, reproductive and nervous systems together with the organs of special sense of the principal classes of vertebrates. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2 semester hour credits (2 cl., 3 lab.)

B 7 *Animal Physiology*

This course deals with the functions of vertebrates with particular emphasis on mammalian and human physiology. Demonstrations are given from time to time and are arranged to correspond as closely as possible with the lecture work.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits

B 8 *Genetics*

This course deals with the laws of variation and inheritance; their application to man and to domestic animals and plants.

Pre-requisite: B 1, B 2

2 semester hour credits

B 9 *Animal Histology*

The lectures deal with the normal microscopic anatomy of the cell; histogenesis; and the fundamental tissues of various invertebrates and vertebrates. The laboratory work illustrates the lectures by means of microscopic preparations.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits (2 cl., 2 lab.)

B 10 *Animal Histology*

Continues and presupposes course B 9. In this part of the course a detailed study is made of the normal microscopic anatomy of the organs of the lower and higher vertebrates. The laboratory work illustrates the lectures by means of microscopic preparations.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits (2 cl., 2 lab.)

B 11 *Vertebrate Embryology*

The lectures deal with the general embryology and the early stages of development of Amphioxus and of the Teleost, frog, chick, and pig. The laboratory work is devoted to the study of embryos in toto and in sections of the early stages of the frog and of the chick.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits (2 cl., 2 lab.)

B 12 *Vertebrate Embryology*

Continues and presupposes course B 11. In this part of the course the lectures deal with the later stages of development of the chick and the pig, and comparisons with the frog. The laboratory work is devoted to the study of embryos in toto and in sections of the later stages of development of organs and organ systems in the chick and the pig.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits (2 cl., 2 lab.)

B 13 Mammalian Anatomy

An advanced laboratory course in the dissection of a mammal.

2 semester hour credits (1 cl., 6 lab.)

B 14 Mammalian Anatomy

Continuation of course B 13.

2 semester hour credits (1 cl., 6 lab.)

B 15 Histological Technique

This course is designed to present the fundamentals of histological technique. Lectures deal with the various methods of fixation, clearing, hardening, embedding, section cutting, and staining of various vertebrate, invertebrate, and plant tissues. Emphasis is laid upon the laboratory work, which consists of preparing histological slides.

2 semester hour credits (1 cl., 4 lab.)

B 16 Histological Technique

Continuation of course B 15.

2 semester hour credits (1 cl., 4 lab.)

B 17 History of Biology

A course treating the development of biological sciences from the earliest times to the present, and tracing the history of biological investigations.

2 semester hour credits

Chemistry

PROFESSORS VERNON, STRAHAN, MCGUIRE; DR. LUDER;
MESSRS. MACKENZIE, GIELLA, and DUBOIS

Ch 1 Inorganic Chemistry

A course designed for those who have had chemistry before entering college. The fundamental ideas of matter and energy; the properties of gases, liquids, and solids; molecular weights, equations; atomic structure; classification of the elements; ionic reactions; and the chemistry of the non-metals are among the topics covered.

4 semester hour credits (3 cl., 3 lab.)

Ch 2 *Inorganic Chemistry*

A continuation of Ch 1 Inorganic Chemistry. Modern ideas covering the theory of solutions of electrolytes are discussed. The chemistry of the metals is covered thoroughly, and time is devoted to an introduction to organic chemistry. The latter part of the course is given to qualitative analysis with particular emphasis on the laboratory work.

4 semester hour credits (3 cl., 3 lab.)

Ch 3 *Inorganic Chemistry*

A course intended for those who have not had chemistry in high school. The content is similar to that of Ch 1, but the treatment is such that no prior knowledge of chemistry is necessary.

4 semester hour credits (3 cl., 3 lab.)

Ch 4 *Inorganic Chemistry*

A continuation of Ch 3.

4 semester hour credits (3 cl., 3 lab.)

Ch 9 *Qualitative Analysis*

A study of various fundamental qualitative laws and principles as applied to the separation of ions. Mass law action, ionic equilibrium, and oxidation-reduction are among the topics covered.

3 semester hour credits (4 cl.)

Ch 11 *Qualitative Analysis Laboratory*

Laboratory work on detection of anions and cations. The experiments are designed to amplify the class work and give experience in the analysis of unknown substances.

2½ semester hour credits (11 lab.)

Ch 12 *Quantitative Analysis*

Each of the major operations, such as weighing, measuring of volumes, titration, filtration, ignition, and combustion, is considered from the standpoint of the theoretical principles involved, and with due consideration of the manipulative technique necessary.

2 semester hour credits (3 cl.)

Ch 13 *Quantitative Analysis*

A continuation of Ch 12. Advanced gravimetric analysis and systematic mineral procedures are studied together with the common technical methods.

2 semester hour credits (3 cl.)

Ch 14 *Quantitative Analysis Laboratory*

Acidimetry and alkalimetry, and oxidation and precipitation methods as used in volumetric work comprise the first part of the laboratory work. This is followed by simple gravimetric analysis.

1½ semester hour credits (7 lab.)

Ch 15 *Quantitative Analysis Laboratory*

A continuation of Ch 14. Advanced gravimetric, electrolytic, combustion, and optical methods are used. In the latter half of the course actual industrial technical methods are used.

2 semester hour credits (9 lab.)

Ch 31 *Organic Chemistry I*

A study of the basic principles of the aliphatic organic compounds. The resemblance of classes is stressed, and emphasis is placed on genetic charts. The industrial significance of the subject is discussed to show the practical nature of organic chemistry.

2 semester hour credits (3 cl.)

Ch 32 *Organic Chemistry II*

A continuation of Ch 31, dealing with the preparation and characteristic reactions of the aromatic organic compounds. Special attention is given to polymerization, diazotization, dyes, and the use of catalysts, nitration, and sulfonation.

A few of the more important heterocyclic compounds are studied.

2 semester hour credits (3 cl.)

Ch 33 *Organic Chemistry Laboratory I*

Preparations and reactions designed to teach the laboratory technique involved in organic chemistry. The method of keeping notes in the work performed and reactions involved is stressed.

1 semester hour credit (5 lab.)

Ch 34 *Organic Chemistry Laboratory II*

This is a continuation of Ch 33. The preparations in this course serve to acquaint the student with such types of chemical reactions as sulfonation, the Grignard reaction, the Perkins reaction, Skraup's synthesis, the Friedel-Crafts' reaction, and the preparation of dyes.

Ch 35 Organic Chemistry III

A continuation of Ch 32, this course includes a study of the preparation and reactions of heterocyclic and alicyclic compounds.

2 semester hour credits (3 cl.)

Ch 40 Physical Chemistry I

This course begins with a short resume of the field of physical chemistry and its relationship to the other courses in chemistry and chemical engineering. Atomic and molecular weights, and the properties of gases, liquids, solids, ionized, non-ionized, and colloidal solutions are then taken up.

3 semester hour credits (3 cl., 4 lab.)

Ch 41 Physical Chemistry II

A continuation of Ch 40, this course includes a consideration of the following topics: rates of reaction, homogeneous and heterogeneous equilibrium, and thermochemistry.

3½ semester hour credits (4 cl., 4 lab.)

Ch 42 Physical Chemistry III

A continuation of Ch 41 including electrical conductance, electrolytic equilibrium, electrolysis, photochemistry, and atomic structure.

3½ semester hour credits (4 cl., 4 lab.)

Ch 48 Colloidal Chemistry

A study of the preparation and properties of suspensoids, emulsoids, emulsions, and gels.

2½ semester hour credits (3 cl., 2 lab.)

Ch 51 Sources of Information

This course is intended to acquaint the chemical student with the constantly increasing volume of scientific literature pertaining to the field of chemistry.

After a brief outline of the entire field of scientific literature and a description of various methods of library procedure, the various available sources of scientific information are investigated. A series of individual library problems, in which the student is required to apply the information obtained in the classroom, forms a very important part of the course.

1 semester hour credit (1 cl.)

Ch 52 *History of Chemistry*

A study of the development of scientific theories and contributions of workers in the field of chemistry. Elective for students majoring in chemistry.

2 semester hour credits (3 cl.)

Ch 63 *Advanced Chemistry*

A survey of the most recent developments in physical chemistry and inorganic chemistry.

2½ semester hour credits (4 cl.)

Ch 64 *Advanced Chemistry*

A survey of the most recent developments in organic chemistry theory and practice.

2½ semester hour credits (4 cl.)

Ch 65 *Thesis*

Original experimental work carried out under the direction of some member of the chemistry department staff. Elective for qualified students majoring in chemistry.

Pre-requisite: Ch 42

3 semester hour credits (9 lab.)

Ch 66 *Thesis*

A continuation of Ch 65.

Pre-requisite: Ch 42

4 semester hour credits (12 lab.)

Co-ordination

PROFESSORS NIGHTINGALE, EVERETT, and MORGAN; MR. PURINTON

C 11 *Vocational Conference*

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in class those students whom he has placed and supervised on co-operative work. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandizing. Prominent men who are leaders in the fields of employment counselling, business, or engineering present the employers' viewpoints. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services," thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

½ semester hour credit (2 cl.)

C 12 *Vocational Conference*

This course is the sequel to C 11 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course shall culminate in the attainment by each student of his after-graduation job.

½ semester hour credit (2 cl.)

Economics

DEAN LAKE; PROFESSORS HAMILTON and TUTHILL; MR. REGAN

Ec 3 Economic Principles

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

2 semester hour credits

Ec 4 Economic Principles

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

2 semester hour credits

Ec 5 Economic Problems

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include consumption, protective tariffs and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

2 semester hour credits

Ec 6 Economic Problems

A continuation of Ec 5. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

2 semester hour credits

Ec 7 Money and Banking

This course, amplifying the more general treatment of money and credit in Ec 3 and Ec 4, considers the problems of monetary and banking control with particular emphasis upon the policies of the Federal Reserve System. Current developments are carefully considered.

Pre-requisite: Ec 3, Ec 4

2 semester hour credits

Ec 11 Labor Problems

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. The attitude of our government toward these problems and its attempts to handle them are analyzed carefully. The suggestions of other groups and agencies in respect to these problems will be treated, e.g. co-operative movement, socialism.

Pre-requisite: Ec 3, Ec 4

2 semester hour credits

Ec 12 Economic Systems

After developing various criteria for evaluating the different economic systems, the course proceeds to a comparative analysis of capitalism, co-operation, socialism, communism, and fascism. The problems of economic planning receive particular attention.

Pre-requisite: Ec 3, Ec 4

2 semester hour credits

Ec 13 Business Cycles

After a study of the conditions which underlie cyclical fluctuations in prices, volume of trade, physical production, and employment, a careful analysis is made of the more significant theories of the business cycle. The possibilities of controlling such fluctuations and of initiating recovery receive extended attention. Throughout the course emphasis is placed upon the current phase of the business cycle and its peculiar problems.

Pre-requisite: Ec 5, Ec 6

2 semester hour credits

Ec 14 International Economic Relations

A careful examination of the important principles of international trade and finance precedes a critical survey of the international commercial policies of modern nations, with special reference to the United States. Such broader problems as the international control of raw materials, exchange restrictions, international cartels and the economic activities of the League of Nations and other international organizations are considered.

Pre-requisite: Ec 5, Ec 6

2 semester hour credits

Ec 15 History of Economic Thought

A critical review of the origin and development of economic thought. After a brief account of the contributions of Plato and Aristotle, the early Christian fathers, and the writers of the Middle Ages, each of the main schools of economic thought is taken up in turn: the Mercantilists, the Physiocrats, the Classical School, the Socialists, the Historical School, the Austrian School, and that of Alfred Marshall.

Pre-requisite: Ec 5, Ec 6

2 semester hour credits

Ec 16 Advanced Economic Theory

The course introduces the student to the more complex aspects of economic theory. Particular consideration is given to the major modern theoretical problems.

Pre-requisite: Ec 15

2 semester hour credits

Ec 17 Statistics

This course is intended to give the student an understanding of statistical principles and methods and their practical application in the social sciences. A study is made of the nature, sources, collection and organization of statistical facts; the presentation of such facts in tabular or graphic form, the various averages, measures of dispersion, and the construction and use of index numbers.

2 semester hour credits

Ec 18 Statistics

The major portion of this continuation of Ec 17, Statistics, concerns the analysis of time series, and includes the methods of obtaining trends, seasonal indexes, and the measurement of cyclical variation. The application of correlation analysis in the field of social science is given extended attention.

2 semester hour credits

Education

PROFESSORS ESTES and WHITE; MR. MORRIS

Note: In addition to the courses listed below, Ps 5 and Ps 6, Educational Psychology, may also be counted as courses in education.

Ed 1 History of Education

Education is considered as the means by which nations have attempted to realize their social and spiritual ideals. This course traces the history of education from ancient times through the Greek and Roman periods, the Middle Ages, the Renaissance and Reformation, down to John Locke and the Enlightenment. The course is concerned with the development of points of view as well as with the details of organization and practice.

2 semester hour credits

Ed 2 History of Education

Beginning with the emotional reaction against formalism in life as exemplified by Rousseau, this course takes up the immediate background of modern education and traces the development of national systems. The influence of such men as Pestalozzi, Herbart, Froebel, Spencer, Mann, Barnard, Dewey, and others is studied in detail. The course closes with a consideration of present tendencies in education.

2 semester hour credits

Ed 3 Educational Organization and Administration

A study of the principles underlying the organization, administration, and supervision of public schools in the U. S. A. The course is illustrated with suitable problems taken from actual practice. It should be of special interest to students who contemplate teaching as a vocation.

2 semester hour credits

Ed 4 Educational Measurements

The course concerns itself with current problems in the field of educational tests and measurements. Most of the lectures are given over to a discussion of the construction and use of new type objective tests, with particular reference to the field of secondary education. The relative merits of the essay and the objective examination are considered in connection with the problem of grades and grading systems. Enough elementary statistics are included to enable students to use intelligently the results of testing. Emphasis is placed upon the importance of an accurate interpretation of test data and upon the futility of indiscriminate testing.

2 semester hour credits

Ed 7 Comparative Education

A discussion of the educational background and current theories and practices of England, France, and Germany. Emphasis is laid upon the bearing of European education on American practice. Much of the assigned reading is in current periodical literature, although a basic text is also used. Lectures, special reports, and class discussions comprise the media by which the course is conducted.

2 semester hour credits

Ed 9 Educational Sociology

The course considers the relationship between education and sociology. Educational objectives are set up from the findings of sociological research and the traditional curriculum is examined in the light of these objectives with a view towards its reconstruction. A critical attitude is maintained toward philosophical implications which will inevitably arise in the course.

2 semester hour credits

Ed 10 Educational Philosophy

A study of the relationship between the science of education and the philosophy of education is followed by a consideration of philosophies of education in the light of basic theses of the history of philosophy. Such topics as evolutionism, behaviorism, pragmatism, instrumentalism, and progressive education are viewed in the perspective of the history of philosophy.

2 semester hour credits

English

DEAN MELVIN; PROFESSORS HOLMES and MARSTON; DR. REYNOLDS;
MESSRS. CLONEY, and NORVISH

E 1-A English I

The aim of this course is to help the student attain competence in the understanding and evaluating of modern literature and in written expression. It includes a review of the structural essentials of the English language, various written assignments, and the study of essays and informational articles.

3 semester hour credits

E 2-A English I

Continuing the general purposes of E 1A, this course proceeds to a study of the special problems of description and narration, and to a critical reading of poems, short stories, and plays.

3 semester hour credits

E 7 Creative Writing

For students interested in imaginative writing. Original papers by the students will be discussed in class and in weekly conference with the instructor. The principles underlying creative writing will be carefully studied.

2 semester hour credits

E 8 Creative Writing

Continued practice in creative writing supplemented by an analysis of the work appearing in the better magazines. The shorter forms will be emphasized.

Pre-requisite: E 7

2 semester hour credits

E 9 Journalism I

The newspaper technique, with practice in re-writing. The general tasks of an "inside" man and the functions of the editorial department.

3 semester hour credits (4 cl.)

E 10 Journalism I

The problems of reporting and newswriting, with written assignments in all types of spot news reporting.

Pre-requisite: E 9

3 semester hour credits (4 cl.)

E 11 Journalism II

Editing the news. The writing of editorials, feature articles, and columns.

Pre-requisite: E 10

3 semester hour credits (4 cl.)

E 12 Journalism II

A general practice course in newspaper writing, the covering of special assignments, and editorial problems.

Pre-requisite: E 11

3 semester hour credits (4 cl.)

E 13 Effective Speaking

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction is planned to eliminate defects of voice, posture, and delivery, and to develop in the student an ability to speak easily, naturally, and forcefully.

1 semester hour credit (2 cl.)

E 14 Effective Speaking

Continued practice in impromptu and extempore speaking, organization of material, consideration of the audience, and vocabulary building, form the basis of the course.

Pre-requisite: E 13

1 semester hour credit

E 15 Survey of English Literature

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

3 semester hour credits (4 cl.)

E 16 Survey of English Literature

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

3 semester hour credits (4 cl.)

E 17 English Drama Before Shakespeare

A study of the origins and growth of English drama from its beginning to its culmination in the work of Shakespeare. A discussion of the morality plays will be followed by a careful consideration of the influence of Plautus, Terence, and Seneca on the dramatists of the age. Plays by Lyly, Peele, Greene, Kyd, and Marlowe will be read as a background for Shakespearean drama.

2 semester hour credits

E 18 Chaucer

An introduction to the language and literature of Chaucer and his contemporaries, with special attention to the "Canterbury Tales." The course includes a consideration of Chaucer's influence on the growth of the language, an examination of the "roman de tiroir" form, and a survey of the chief types of European popular narrative which the "Canterbury Tales" represents.

2 semester hour credits

E 19 Shakespeare

The Elizabethan period, sixteenth century London, the Shakespearean stage and audience, and the actors' companies will be discussed. Shakespeare's life and his development as a dramatist will be carefully considered. Five plays will be intensively studied.

2 semester hour credits

E 20 Shakespeare

Lectures will be given on Shakespeare's language, the text of the plays, Shakespearean criticism, editors' problems, etc. Four plays will be intensively studied. The sonnets will be read and discussed.

2 semester hour credits

E 21 Nineteenth Century Poetry I

Background forces which shaped the Romantic period will be carefully studied; the influence of German idealists, of the French Revolution, and of the natural reaction from the classicism of Pope and Johnson will be analyzed and evaluated. Poetry of Wordsworth, Coleridge, Byron, Keats, and Shelley will be studied critically.

2 semester hour credits

E 22 Nineteenth Century Poetry II

A study of the poetry of the Victorian era with emphasis on the writings of Browning and Tennyson. The influence of the age on its poets will be carefully considered.

2 semester hour credits

E 23 Seventeenth and Eighteenth Century Prose

A study of the important, non-fiction prose works of Bacon, Browne, Swift, Addison, Steele, Johnson, and Boswell, among others, with emphasis on the relationship of the literature to the age. The various prose styles will be discussed. A written paper will be required.

2 semester hour credits

E 24 Nineteenth Century Prose

An examination of significant nineteenth century writers as to their social, political, literary, and educational ideas. Lamb, Hazlitt, Carlyle, Macaulay, Newman, Ruskin, Arnold, Huxley, and Stevenson are among those to be considered. A written paper will be required.

2 semester hour credits

E 25 American Literature to 1860

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

2 semester hour credits

E 26 American Literature After 1860

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

2 semester hour credits

E 27 History of the English Novel

This survey will trace the development of the novel from the 18th century to the beginning of the Victorian era. It will deal with the maturing of the novel form in the hands of Defoe, Richardson, Fielding, and Smollett; the "Gothic romances" of Walpole and Lewis; and the novel of manners as seen in Jane Austen.

2 semester hour credits

E 28 History of the English Novel

This course will deal with the work of the Great Victorians, particularly Thackeray, Dickens, Eliot, Conrad, and Hardy. A few contemporary novels will be discussed. The student will be expected to read widely in the field.

2 semester hour credits

E 29 Great European Writers

An introduction to the classics of Ancient and Medieval literature. The purpose of the course is to acquaint the student broadly with our literary heritage and to furnish him background for later studies in literature.

2 semester hour credits

E 30 Great European Writers

A survey of the literature of Europe from the Renaissance to the beginning of the twentieth century.

2 semester hour credits

E 31 Comparative Drama

Through the analysis of plays of various origins, this course shows the development of essential techniques in drama from period to period, and demonstrates how a general type of drama manifests special characteristics in accordance with the social and political backgrounds against which it is set. During this term the emphasis is placed on the classic literature of the Greek and Roman theater.

2 semester hour credits

E 32 Comparative Drama

This course, a continuation of the study begun in E 31, deals with the representative plays of the Continent since 1600.

2 semester hour credits

E 33 Modern Literature 1895-1915

Beginning with a study of late nineteenth-century literature in England and America, the course considers the principal literary developments of the period 1895 to 1915. New forms and methods in poetry, the novel, the short story, and the play are studied, and are illustrated by the work of literary groups and movements and by such major writers as Walt Whitman and Henry James.

2 semester hour credits

E 34 Post-war Literature

A survey of contemporary literature in England and America. Outstanding writers are studied in detail. Some of the subjects discussed are recent changes in form and technique; literary experiments; the effect on literature of the World War, and of recent social changes. During the course each student writes a paper and presents a class report on a contemporary author.

2 semester hour credits

Geology

PROFESSOR PUGSLEY

Gy 1 General Geology

A study of earth movements and various terrestrial applications of solar energy. Lectures on fundamental general facts as to origin and movements of the earth, weathering, work of winds, underground and surface waters, glaciers and the glacial period, lakes and swamps, and vulcanism.

2 semester hour credits

Gy 2 *General Geology*

Course Gy 1 is continued with such topics as mountain formation, oceans, oceanic life, atmosphere touching upon meteorology. A considerable portion of time is given to the study of igneous, sedimentary and metamorphic rocks, supplemented by laboratory and field work.

2 semester hour credits

Gy 5 *Historical Geology*

A review of the beginning of the earth, its development and historical significance of rock characters. This is followed by a study of the pre-Cambrian Paleozoic and the early Paleozoic sub-era.

2 semester hour credits

Gy 6 *Historical Geology*

Continuation of the first semester taking in the late Paleozoic sub-era, and the Mesozoic and Cenozoic periods, and continuing through the geologic history of man.

2 semester hour credits

Government

PROFESSOR BRUCE; MESSRS. LARSON and KEITH

Gv 1 *American Government and Politics*

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative, and judicial machinery under the party system of government and bureaucracy.

2 semester hour credits

Gv 2 *American Government and Politics*

A more detailed study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative, and judicial functions of government in a democratic country.

2 semester hour credits

Gv 3 Comparative Government

The older governments of Europe, those, principally of Great Britain and France, but also of Switzerland and the Scandinavian countries, are described and analyzed in this course. Institutions are compared in these various states with reference to America and the newer governments of Europe.

2 semester hour credits

Gv 4 Comparative Government

A study of the newer governments of Europe, as found in Germany, Italy, and the Soviet Union. Democracy and dictatorship are analyzed as different modes of life and rule. These states are compared to each other, to the older governments of Europe, and to the United States.

2 semester hour credits

Gv 5 American Constitutional Law

After a careful study of the influences affecting the framing of the Constitution, attention is turned to the leading constitutional principles of the American government as developed through judicial interpretation.

2 semester hour credits

Gv 6 American Constitutional Law

A continuation of Gv 5. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "inter-state commerce."

2 semester hour credits

Gv 7 Origins of Political Theory

A survey of political philosophy from Plato and Aristotle to Bentham. The nature, origin, forms, and ends of the state and government are covered.

2 semester hour credits

Gv 8 Modern Political Theory

A critical study is made of the major developments in political theory since Bentham, with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

2 semester hour credits

History

PROFESSOR POTTER and ASSISTANTS

H 1 History of Civilization

This is primarily a background course. Introductory lectures deal with primitive society, the development of language and writing, and the early contributions of Egypt and Asia. More detail is given to the structure of Greek and Roman society, the rise of the Christian Church, the barbarian invasions of the Empire, the growth of Islam, and the life of the early Middle Ages.

4 semester hour credits (4 cl.)

H 2 History of Civilization

This course deals with the growth of the monarchies in Europe, the medieval Church, the art and literature of the Renaissance and Reformation, the economic revolution, the Age of Reason in France and England, the Old Regime and the Revolution in France, and the growth of science and industrialism.

As in H 1, the emphasis is upon the cultural rather than the political history of Europe.

4 semester hour credits (4 cl.)

H 5 Europe, 1789-1870

This course aims at describing and interpreting the development of European states from the French Revolution to 1870. Major topics include the Metternich system, the emergence of French Republicanism, and the unification of Italy and Germany. Non-political factors receive much attention throughout the course.

2 semester hour credits

H 6 Europe, 1870-1938

The international relationships which precipitated the tragedy of 1914 are considered. The rise of militarism and nationalism, secret diplomacy, propaganda and the press, the "incidents" which led to the World War, the conduct of the war, the peace treaties, and the rise of socialism and fascism are discussed in this course.

2 semester hour credits

H 7 England to 1688

This course surveys the political, social, religious, and economic development of England to the Revolution of 1688. Political history receives the major emphasis, but stress is placed upon the rise of the English institutions which represented England's outstanding contribution to civilization.

2 semester hour credits

H 8 England since 1688

A continuation of H 7. A study is made of Queen Anne's England, the policies of Walpole, England's part in European politics, the age of the first Reform Bill, English imperialism, and Victorian society.

2 semester hour credits

H 9 The United States to 1865

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected, though the political history is stressed.

2 semester hour credits

H 10 The United States Since 1865

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

2 semester hour credits

H 11 Latin American History

This course deals with the European background of Spanish and Portuguese colonization in the New World, the exploits of the conquistadores, the Indian civilizations, colonial institutions, and the forces which gave rise to the revolutions in the early 19th century.

2 semester hour credits

H 12 Latin American History

This course continues H 11, and describes the Wars of Independence and the rise of the republics. A study is made of the international relations of the Latin American countries, the Monroe Doctrine, and the Pan-American conferences.

2 semester hour credits

Mathematics

PROFESSORS SPEAR and HASKINS; DR. LACOUNT; MESSRS. SEWELL,
DEAN and COOK

M 1 College Algebra

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid but thorough review of the fundamentals of algebra precedes this. The solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

3 semester hour credits

M 3 Trigonometry

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines, cosines, tangents, half angles; solution of oblique and right triangles; transformation and solution of trigonometric and logarithmic equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing De-Moivre's theorem and the exponential form of the complex number.

2 semester hour credits (2 cl.)

M 4 Analytic Geometry and Introduction to Calculus

This being a basic course in preparation for any further study of mathematics, it requires a thorough knowledge of the fundamentals of algebra. The course covers cartesian and polar coordinates; graphs; the equations of simpler curves derived from their geometric properties; thorough study of straight lines, circles, and conic sections; intersections of curves; transformation of axes; plotting and solution of algebraic equations of higher order and of exponential, trigonometric, and logarithmic equations;

loci problems. The general equation of the second degree is thoroughly analyzed in the study of conic sections. Some time is devoted to curve fitting from empirical data.

Explicit and implicit functions, dependent and independent variables, some theory of limits, continuity and discontinuity are given special attention from both the algebraic and the geometric points of view. Some theorems on the infinitesimal are introduced, and a study is made of infinity and zero as limits. Relative rates of change, both average and instantaneous, and the meaning of the slope of a curve follow. The differential and the derivative as applied to algebraic functions with the geometric interpretation are then studied. Tangents to curves of the second degree follow here. Simple applications with interesting practical problems help to develop the interest here and lay a solid foundation for the study of the calculus. The introduction of the differential at the same time with the derivative helps considerably to bridge the large gap which usually exists when the student passes from the study of the elementary analytic geometry to the infinitesimal of calculus.

5 semester hour credits (5 cl.)

M 5 Differential Calculus

The differential is introduced at the outset of the course, together with the derivative; geometric and practical illustrations are given of both; and both are carried along throughout the course. The work consists of differentiation of algebraic, trigonometric exponential, and logarithmic functions, both explicit and implicit; slopes of curves; maxima and minima with applied problems; partial differentiation; parametric equations; derivatives of higher order; curvature; evolutes and involutes; points of inflection; related rates; velocities, acceleration; indeterminate forms; expansion of functions; series. Although the subject matter deals with considerable theory, constant sight is kept of the practical application of the theory. The geometric interpretation of every new subject is carefully defined, and problems are continually solved dealing in practical applications of the theory in geometry, physics, and mechanics.

Pre-requisite: M 4

3 semester hour credits (4 cl.)

M 6 Integral Calculus

This course, a continuation of Calculus M 5, deals with integration as the inverse of differentiation as well as the limit of summation. The topics covered are methods of integration; use of integral tables; definite integrals; double and triple integrals; areas in rectangular and polar co-ordinates; center of gravity; moment

of inertia; length of curves; volumes of solids; areas of surfaces of revolution; volumes by triple integration; practical problems in work, pressure, etc., depending on the differential and integral calculus for solution; solution of simpler differential equations.

3 semester hour credits (4 cl.)

M 7 *Differential Equations I*

The elementary theory of differential equations and the method of solution of certain ordinary differential equations are offered here as a general course in mathematics. Although this is principally a problem course in solving differential equations, properties of the equations and of their solutions are deduced, and applications in the various fields of scientific work are analyzed.

Pre-requisite: M 6

2½ semester hour credits (4 cl.)

M 8 *Differential Equations II*

Special cases of first order equations are considered, and a fuller treatment of first order equations of higher degree leads to a consideration of envelopes, special loci, and particular curves. The general second order linear equation is studied, and the several well-known methods of attack are presented. Solution in series form of equations whose primitives are not made up of classified functions is studied. Elementary partial differential equations of the first and second orders, leading to a presentation of Fourier's Series, conclude the course.

Pre-requisite: M 7

3 semester hour credits (4 cl.)

M 9 *Higher Algebra*

Complex numbers and the elementary theory of vectors start this course. It continues with the solution of equations of the third and fourth degree, Horner and Sturm theorems, the solution of higher degree equations with the use of graphs. Some invariant forms are studied. Then follow general systems of equations with the complete study of determinants, and some of the elements of matrices. A study is made of the theory of elimination, linear dependence, and linear transformations. If time permits, a study is made of probability and related subjects.

Pre-requisite: M 1, M 3

3 semester hour credits (4 cl.)

M 10 *Curve Analysis*

This course deals with the methods of approximation of roots; plotting; empirical equations; and alignment charts.

Pre-requisite: M 5

3 semester hour credits (4 cl.)

M 11 *Solid Analytic Geometry*

The study of analytic geometry is extended here into three dimensions, mostly with rectangular co-ordinates, although cylindrical and spherical co-ordinates and the transformation between the three systems are also introduced. The equations of the first and second degree are analyzed. A study is made of line segments and angles; planes, linear equations in three variables; normal forms; systems of planes and angles; surfaces in general; quadric surfaces. Some work is done on general curves, certain special curves, surfaces of revolution, locus problems, and homogeneous co-ordinates.

Pre-requisite: M 4

3 semester hour credits (4 cl.)

M 12 *Modern Geometry*

This course offers a brief outline of the history of geometry through the ages, especially the 19th century; analysis of geometry of the triangle and circle; systems of co-ordinates, linear dependence, transformations; principle of duality; poles and polars; harmonic division, cross ratios; and conical projection. Certain special theorems include those of Desargues, Pascal, and Brianchon.

Pre-requisite: M 4

3 semester hour credits (4 cl.)

M 13 *Spherical Trigonometry*

This is a complete course in the study of spherical trigonometry, solving right and isosceles spherical triangles; Napier's rules; laws of sines, cosines, half-angles, and half-side formulas; Napier's analogies. A detailed solution of oblique spherical triangles including areas follows. Considerable time is spent on the celestial sphere and the astronomical triangle and on navigation, calculation of latitude and longitude, bearing, and time.

Pre-requisite: M 3

3 semester hour credits (4 cl.)

M 14 *History of Mathematics*

In this course a survey is made of the development of various branches of mathematics, and attention is given to the lives of men who have made outstanding contributions to mathematical science.

2 semester hour credits

M 15 *Advanced Calculus*

No student should choose this course unless he is thoroughly familiar with the contents of courses M 5 and M 6. The subjects covered are continuity, indeterminate forms, applications of partial

differentiation, vectors and differentiation of vectors, the complex variable, differentiation and functions of the complex variable, differentiation of integrals, envelopes.

Pre-requisite: M 6

3 semester hour credits (4 cl.)

M 16 *Advanced Calculus*

This is a continuation of M 15. The course starts with work in differential equations and problems in damped vibration and the potential function. Other topics are the hyperbolic function; expansion in infinite series including, Fourier series; integration of special forms with definite, multiple, and improper integrals; probability integral; Gamma function; Beta function; Bessel's function; line integrals and applications.

Pre-requisite: M 15

3 semester hour credits (4 cl.)

M 17 *Series*

Various types of series and their uses. Study of limits, infinite series, tests for various types of convergence; divergence; algebraic operations with series; integration and differentiation; applications and use of special series.

Pre-requisite: M 5, M 6

3 semester hour credits (4 cl.)

M 18 *Theory of Equations*

This course is devoted more to the theory and analysis of equations and roots than to actual solutions. The properties of polynomials and continuity are studied. The complex number, algebraic and geometric form, is reviewed. The solutions of quadratic, cubic, and quartic equations are discussed and analyzed with various theorems on roots. Proof is given of the fundamental theorems; other theorems discussed are the remainder theorem, Horner's and Newton's methods, limits of roots, Rolle's theorem, Descarte's rule, Sturm's theorem, Budan's theorem, and De-Moivre's theorem. Transformations are studied and an analysis is made of rational, irrational, complex, and multiple roots. Symmetric functions including the relation of roots and coefficients are also taken up. Some work is done with discriminants. The course closes with the theory of least squares and curve fitting.

3 semester hour credits (4 cl.)

Philosophy

PROFESSOR HAVICE; DR. DUDDY and ASSISTANTS

Ph 1 Introduction to Philosophy

This introductory course combines the historical and systematic approaches to the subject. The historical treatment includes a

survey of the chief philosophers and the development of basic philosophical ideas. The systematic treatment presents the several types of philosophy, such as realism, materialism, idealism, and pluralism. The place of philosophy is considered in its relation to ethics, religion, and natural sciences. The course both acquaints the student with facts about philosophy and trains him to think philosophically.

2 semester hour credits

Ph 2 Problems of Philosophy

The chief systems of thought are applied to what may be termed the persistent problems of philosophy. The problems are to be found in the fields of epistemology, teleology, and metaphysics. The following topics suggest representative problems which will be studied: the relation between mind and body, the nature and extent of freedom of the will, the validity of knowledge, and the bearing which the more recent views in physics and psychology have upon related philosophical problems.

2 semester hour credits

Ph 3 History of Philosophy

Beginning with the early Greek age period, the course traces the development of philosophical thought through the patristic and scholastic periods. A study is made of the transition from medieval to modern philosophy.

2 semester hour credits

Ph 4 History of Philosophy

The first half of the course is a study of the period from Bacon to Kant; the second half begins with the time of Kant and ends with a consideration of present-day philosophers and their systems of thought.

2 semester hour credits

Ph 5 Philosophy of Religion

Fundamental questions of religious belief are examined in the light of philosophy. Modern religions are compared with respect to their views on the nature of the Deity, the meaning of life, and the relationship between man and God. Further topics for study include the question of the validity of mysticism and intuitive knowledge of religious truth, the immortality of the soul, the meaning of the supernatural, the presence of natural evil, and the relation of morality to religion.

Students may take Philosophy of Religion without having had any other course in this department, although there is an advantage in having had the Introduction to Philosophy.

2 semester hour credits

Ph 6 Logic

Formal logic is subordinated in this course to the more practical consideration of the methods of critical and reflective thought. Common fallacies in logic are indicated, and the student is given frequent exercises in correct reasoning. Attention is given to the principles of induction, deduction, verification, syllogism, and assumption. To assist the student to think clearly and correctly is the essential purpose of this modified course in logic.

2 semester hour credits

Modern Languages

PROFESSOR BARNASON; MESSRS TENNEY and COOPERSTEIN

FRENCH

F 1 Elementary French

A beginner's course stressing the essentials of grammar, practice in pronunciation, and progressive acquisition of basic vocabulary and current idiomatic expressions.

3 semester hour credits (5 cl.)

F 2 Elementary French

A continuation of F 1. Most of the time is devoted to the reading of simple texts with oral practice based on the material read.

3 semester hour credits (5 cl.)

F 3 Intermediate French

In this course several texts of average difficulty are read and studied. The work includes a thorough review of grammar, oral practice based on the reading matter, memorizing of selected passages, dictation, study of idioms, vocabulary building, and outside reading.

3 semester hour credits (upperclass, 4 cl.)

F 4 Intermediate French

A continuation of F 3, with an increasing amount of both class and outside reading.

3 semester hour credits (upperclass, 4 cl.)

F 5 *Advanced French*

This course aims to develop further the student's ability to read and speak French and to acquaint him with representative works of modern French literature. Some of the texts to be studied will deal with French geography, history, and civilization.

Pre-requisite: F 4

3 semester hour credits (upperclass, 4 cl.)

F 6 *Advanced French*

A continuation of F 5. The reading is mainly from writers of the second half of the 19th century.

3 semester hour credits (upperclass, 4 cl.)

F 7 *French Classicism*

This course is designed to furnish a comprehensive survey of the background and development of French literature of the 17th century and to aid the student in a critical interpretation of the most significant works of the period. The reading is mainly from the dramatic works of Corneille, Racine, and Moliere. Collateral reading and reports.

Pre-requisite: F 6

2 semester hour credits

F 8 *French Classicism*

A continuation of F 7. The works of La Fontaine, Descartes, and Pascal receive the major attention.

2 semester hour credits

F 9 *French Romanticism*

A study of the origins and development of the Romantic movement in French literature. The readings include significant selections from the novels of the principal writers of the Romantic school, as well as some of the more important Romantic dramas.

Pre-requisite: F 6

2 semester hour credits

F 10 *French Romanticism*

Continuing F 9, the course pursues further the study of the Romantic drama. The latter part of the term is devoted to the reading of selections of poetry from the works of Lamartine, Hugo, Musset, and others.

2 semester hour credits

GERMAN**G 1 Elementary German**

A beginner's course stressing the essentials of grammar, practice in pronunciation, and progressive acquisition of basic vocabulary and current idiomatic expressions.

3 semester hour credits (upperclass, 5 cl.)

G 2 Elementary German

A continuation of G 1. Most of the time is devoted to the reading of simple texts, with oral practice based on the material read.

3 semester hour credits (upperclass, 5 cl.)

G 3 Intermediate German

In this course several texts of average difficulty are read and studied. The work includes a thorough review of grammar, oral practice based on the reading matter, memorizing of selected passages, dictation, study of idioms, vocabulary building, and outside reading.

3 semester hour credits (4 cl.)

G 4 Intermediate German

A continuation of G 3, with an increasing amount of both class and outside reading.

3 semester hour credits (4 cl.)

G 5 Advanced German

This course aims to develop further the student's ability to read and speak German and to acquaint him with representative works of modern German literature. The texts to be studied consist mainly of outstanding German "Novellen" of the 19th century.

Pre-requisite: G 4

3 semester hour credits (4 cl.)

G 6 Advanced German

A continuation of G 5. The reading consists chiefly of selections from contemporary German writers of prose.

3 semester hour credits (4 cl.)

G 7 The Classical Period of German Literature

This course aims to trace the development of German literature during the second half of the 18th century, beginning with the Storm and Stress period. The works of Lessing, Goethe, and Schiller will receive the major emphasis.

Pre-requisite: G 6

2 semester hour credits

G 8 *The Classical Period of German Literature*

A continuation of G 7. The readings will consist mainly of the later works of Goethe and Schiller.

2 semester hour credits

G 9 *German Literature of the Nineteenth Century*

This course will consider the chief tendencies in German literature from the beginning of Romanticism to the coming of Naturalism. Representative works of the principal writers of the period will be read and analyzed.

Pre-requisite: G 6

2 semester hour credits

G 10 *German Literature of the Nineteenth Century*

A continuation of G 9. Among the works to be read will be some of the outstanding dramas of the latter half of the century.

2 semester hour credits

Physical Education

PROFESSORS PARSONS and TATTON; DR. KONTOFF;
MESSRS. MACKENZIE, GALLAGHER, KOPP, LAVEAGA, HULTGREN, and
DUNN

PE 2 Hygiene

One class hour a week is devoted to the study of information closely related to the Physical Training work and to personal and mental hygiene. For this class lecture, each student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

1 semester hour credit

PE 3-4 Physical Training

All first year students are required to take Physical Training. Health, strength, and vitality do not come by chance, but by constant attention to good habits of living.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, hockey, football, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from Physical Training because of physical defects are required to present to the faculty a petition supported by a physician's certificate.

PE 5 Principles of Physical Education

The course considers the place of physical education in the educational program in the United States. The development of physical education programs based on the changes in society from primitive to modern times is discussed, careful attention being given to the needs of the individual, as well as to the needs of the group. Relationship between medical service and the physical education department is considered, and methods of co-ordination between these two important departments are investigated. The history of physical education, in so far as it affects the modern program, is included in the course. Factors such as economic, social and political influences, which have an important effect on the conduct of the program, are also considered. School health programs are discussed, with particular emphasis upon the medical and physical examinations and tests and the procedures which follow. Diagnostic and remedial techniques, classroom hygiene, and principles of preventive and corrective exercise are discussed. The course also includes a consideration of the proper place occupied by interschool and intercollegiate athletics in the physical education program.

Required of all students electing Physical Education as a minor field.

2 semester hour credits

PE 6 Play and Recreation

The purpose of this course is to prepare students for leadership of leisure time activities. It considers the biological and sociological aspects of play and its increasing importance in modern life. From a practical point of view the course deals with the problems faced by the director of leisure time activities in the community, in the school, or on the playground. The course should be of special interest to students who contemplate entering social work or teaching.

2 semester hour credits

PE 7 History of Physical Education

To provide a valuable background for students in this field, this course traces the whole history of physical education from the days of the Greeks and the Romans up to the present. Attention is given to a number of special systems of training which have been developed in Europe.

The course is required of all students electing Physical Education as a minor field.

2 semester hour credits

PE 8 Administration of Physical Education

This course is designed to acquaint the student in the field of physical education with many of the administrative problems which are likely to arise in connection with his work. The subject matter includes a consideration of the objectives of the physical education program, personnel required, and various allied subjects such as gymnasia, athletic fields, and the construction and maintenance of these units. The conduct of the athletic program including requirements for equipment, arrangements of schedules, coaching, meets, etc., is also included.

Required of all students electing Physical Education as a minor field.

2 semester hour credits

PE 9 Football

This course is designed to furnish the student interested in football coaching with a thorough knowledge of the sport. Careful consideration is given to the fundamentals in discussing the plays of each position in the line and backfield. Various well-known offensive and defensive systems are discussed for the purpose of considering their general merits, as well as adaptations to particular situations. Training and conditioning, rules and interpretation, and officiating are given proper attention.

2 semester hour credits

PE 11 Track and Field Events

The course considers the care and training of track athletes. Practice schedules, selection of material, conduct of meets, etc., are discussed. The viewpoint from which the topics are treated is that of the student of coaching technique. In connection with this course, action pictures taken from actual performances by world champions, together with moving pictures, are of great value in demonstrating the style and technique of track and field events.

2 semester hour credits

PE 12 Basketball and Baseball

Various systems in use throughout the country are compared and contrasted. Team play, offense, defense, signal systems, training and conditioning, rules, and officiating are among the topics studied. The student in this course should acquire a thorough knowledge of all phases of the sports.

2 semester hour credits

Physics

PROFESSORS MUCKENHOUPT, WELCH, COOLIDGE, and, JOHNSON;
MESSRS. HILLI, and COOK

P 1-A Survey of the Physical Sciences

The purpose of the course is to give a definite conception of the physical world to those students who ordinarily would not elect a science course but who need to know something about the contributions and the place of the physical sciences in contemporary civilization. This course begins with a study of the universe and solar system. Consideration is given to the principles of distance, mass and weight, and the simple dynamics of bodies. The earth is studied from the viewpoint of its geological, meteorological, and chemical aspects, these main fields introducing a non-mathematical discussion of magnetism, heat, and electricity.

4 semester hour credits (4 cl.)

P 2-A Survey of the Physical Sciences

In this course, which continues P 1-A, the phenomena of light are taken up. Following this, consideration is given to spectroscopy and matter structure, the periodic table, acids, bases, salts, and organic compounds. The course concludes with a discussion of certain aspects of physics which are of practical importance in the household, such as heating, lighting, refrigeration, and electrical appliances.

4 semester hour credits (4 cl.)

P 1 Physics I

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces, and equilibrium under the action of concurrent forces.

3 semester hour credits

P 2 Physics I

This is a thorough course in magnetism and electricity, covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

3 semester hour credits

P 3 Physics II

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

Pre-requisite: M 1, M 3, P 2

2 semester hour credits

P 4 Physics II

The topics studied are thermometry, expansion of solids, liquids and gases, calorimetry, change of state including latent heat of fusion and vaporization (sublimation), triple point diagram, conduction and radiation, and the mechanical equivalent of heat.

2 semester hour credits

P 5 Physics Laboratory

This course consists of experiments in mechanics, light, electricity, and magnetism performed by each student, supplementing the lecture and classroom work of courses P 1, P 2, and P 3. The experiments on mechanics include the use of the vernier, micrometers, and spherometer; the calculation of true weights; the funicular polygon; gyroscopic motion; simple harmonic motion; and the determination of areas by means of the planimeter. Other experiments in this course include plotting the magnetic field about a bar magnet and the determination of the pole strength and field strength of the magnet, the position of images in a combination of lenses, and one experiment on electrostatics.

1 semester hour credit (2 lab.)

P 6 Physics Laboratory

A continuation of the experiments started in P 5, including experiments on sound and heat. Some of the experiments of this course concern the modulus of elasticity, the determination of the velocity of sound, the coefficient of cubical expansion of mercury, the air thermometer, the determination of the mechanical equivalent of heat, the study of the maximum and minimum thermometers, and the use of the spectroscope in the study of the bright line and solar spectra. The experiments of this course supplement the class work of courses P 1, P 2, P 3, and P 4.

1 semester hour credit (2 lab.)

P 9 Optics

This is a course in the more advanced forms of geometrical optics and the study of physical optics.

Pre-requisite: P 3, M 6

3 semester hour credits (3 cl., 2 lab.)

P 10 Optics

Continuing P 9, a detailed study is made of physical optics with considerable time spent on modern spectroscopic theory.

Pre-requisite: P 9

3 semester hour credits (3 cl., 2 lab.)

P 13 Acoustics

A complete mathematical study of the modes of vibration of strings, pipes, membranes; and a consideration of vibrating systems in general.

Pre-requisite: P 3, M 6

3 semester hour credits (3 cl., 2 lab.)

P 14 Acoustics

A course in the application of the principles of P 13 to the problems of speech, audition, sound, filters, musical instruments, and the acoustics of auditoriums.

Pre-requisite: P13

3 semester hour credits (3 cl., 2 lab.)

P 15 Modern Physics

Consideration is given to molecular relations, and then to atomic structure, quantum mechanics, and allied subjects.

Pre-requisite: P 4, M 7

3 semester hour credits (3 cl., 2 lab.)

P 16 Modern Physics

Radioactivity, artificial transmutation, nuclear structure, and the devices for studying these phenomena are here presented. Some time is also given to the Stark, Zeeman, and Raman effects; and to X radiation and cosmic rays.

Pre-requisite: P 15

3 semester hour credits (3 cl., 2 lab.)

ME 20 Applied Mechanics (Statics)

The subjects treated are collinear, parallel, concurrent, and non-concurrent force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the funicular polygon method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

Pre-requisite: P 4

3 semester hour credits (4 cl.)

ME 21 *Applied Mechanics (Kinetics)*

The subjects treated are continuation of first moments as applied to varying intensity of force and to the determination of centers of gravity of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia, product of inertia, principal axes; uniform motion, uniformly accelerated motion, variable accelerated motion, harmonic motion; simple pendulum, rotation, work, energy, momentum, and impact.

3 semester hour credits (4 cl.)

ME 30 *Thermodynamics*

In this introductory course in the fundamentals of thermodynamics the following subjects are discussed: general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including development and use of tables and charts; thermodynamic processes of gases, and saturated and superheated vapors; and the general equations for the flow of fluids.

Pre-requisite: P 4

3 semester hour credits (4 cl.)

EL 13 *Electrical Measurements I*

This course is designed to acquaint the student with the theory of precision measure as applied to electrical measurement in particular. Some of the subjects covered are theory of measurements, directly and indirectly measured quantities, recording of observations, rules of significant figures, classification of error, law of error, characteristics of error, and laws of average deviation. Most of the problems studied fall in the following two general classifications: (1) Given the precision measures of the directly measured quantities, to determine the precision measure of the indirectly measured quantity as calculated by the use of engineering equations which apply to measurements work. (2) Given the prescribed precision to be obtained in the indirectly measured quantity, to determine the precision measure of the directly measured components which enter into its calculations.

In this course parts and theory of operation of resistance devices, galvanometers, ammeters, and voltmeters are discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities: resistance, resistivity, conductance; D. C. electromotive force, current, power, and energy. This part of the work involves the student's use of visual indicating devices.

2½ semester hour credits (4 cl.)

EL 14 *Electrical Measurements II*

Resistance, capacitance, inductance, magnetic induction, A. C. power, and energy are treated in this course, with a detailed discussion of the methods of measuring them. This phase of the subject involves the use of both visual and sound indicating devices, and includes some work on the uses of circuits and bridges designed for high frequency measurements and tube constant determination. The student is given a thorough discussion of the construction, theory of operation, method of use, sources of error, etc., of the types of measuring instruments used in commercial work and in the standardizing laboratory.

2 semester hour credits

EL 21 *Electrophysics*

The first part of this course is concerned with Faraday's Rule and the extended Ampere Rule, divergence of electrical vectors, Poisson's equation, and Maxwell's field equations and wave equations. Study is then made of molecular activity, and various properties of and measurements on electrons.

Pre-requisite: M 7

1 semester hour credit (2 cl.)

EL 22 *Electrophysics*

Continuing EL 21 the topics considered are photo-electricity, X-rays, atomic structure and the spectrum, vacuum tubes, radio-activity, and the modern physics of matter and waves.

2 semester hour credits

EL 23 *Electrical Measurements Laboratory*

This course consists of a series of experiments emphasizing the principles developed in courses EL 13 and EL 14. The student becomes familiar with the standard apparatus used in testing laboratories. Particular stress is laid on the correct use of the apparatus, and precision discussions are required throughout.

The general experiments cover various methods of measuring resistance, resistivity, conductivity, electromotive force, current, inductance, mutual inductance, capacitance, hysteresis, etc.

Further experiments are made in cable testing, magnetic testing, wave form determination, and the use of special apparatus.

Thorough training in the principles of precision measure and measurements technique is also given, and applied to each experiment performed.

2 semester hour credits (3 lab.)

EL 24 *Advanced Measurements Laboratory*

This course concerns the use of laboratory and secondary standards and precision methods as applied to the checking of resistances, and the calibration of indicating and integrating instruments of various types.

It involves the use of the potentiometer, Weston laboratory standard instruments; precision model Kelvin Low Resistance and Carey-Foster Bridges; Westinghouse portable oscillograph, cathode ray oscillograph; ordinary, reflex, and logarithmic vacuum tube voltmeters; Anderson Bridge, Edgerton Stroboscope; low, medium, and high frequency oscillators; vacuum tube bridge; potential phase shifters and rotating standard. The work includes testing for characteristics and investigation of the action of multi-electrode tubes, thyatron, tungal rectifier, artificial telephone line, and Piezo oscillating crystals.

Precision work is insisted on throughout. The student is trained to develop speed and quickness of manipulation, but never at the expense of quality and accuracy of the work.

2 semester hour credits (3 lab.)

Psychology

PROFESSOR ESTES and ASSISTANTS

Ps 1 *Introduction to Differential Psychology*

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

2 semester hour credits

Ps 2 *General Psychology*

An introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

2 semester hour credits

*Ps 5 *Educational Psychology*

Considers the applications of psychological facts and principles to educational problems and practices.

Pre-requisite: Ps 1 and 2

2 semester hour credits

*Ps 6 *Educational Psychology*

Continuation of Ps 5.

2 semester hour credits

**May be counted for credit in either Psychology or Education.*

Ps 7 Social Psychology of Everyday Life

A course devoted to the psychological examination of some of the phenomena observable in everyday social life. These include customs, crazes, fashions, rumor, propaganda, crowds, leadership, competition, and co-operation.

Pre-requisite: Ps 1 and 2

2 semester hour credits

Ps 8 Social Psychology, Theory, and Methods

A survey of the field of social psychological theory and an examination of the experimental techniques utilized in this field of psychology. Special emphasis is placed upon attitudes and their measurement.

2 semester hour credits

Ps 9 Psychology of Personality

Presents a survey of historical and contemporary theories of the nature of personality. The problems of the generality of traits, the consistency of expression, and the relation of cultural factors to personality, growth, and integration will be discussed.

Pre-requisite: Ps 1 and 2

2 semester hour credits

Ps 10 Abnormal Psychology

An introduction to the field of psychopathology. The psychology of the neuroses and the minor disturbances of everyday life are emphasized. Interpretation of clinical findings in the light of some contemporary schools of psychology is included.

2 semester hour credits

Sociology

PROFESSOR HAVICE; DR. DUDDY and ASSISTANTS

S 1 Introduction to Sociology

In presenting a survey of the origins and sources of human society, this study provides orientation for the courses in principles and problems which follow. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

2 semester hour credits

S 2 *Principles of Sociology*

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires only an elementary survey of the subject, as well as the student who plans to take advanced courses in social science.

2 semester hour credits

S 3 *Social Problems*

Attention is given the nature, complex causation, and inter-relatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

2 semester hour credits

S 4 *Social Pathology*

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group. Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

2 semester hour credits

S 5 *Criminology*

Delinquency and crime are defined and classified, and their casual factors indicated. The various theories as to what makes criminals are dealt with, and a brief history of crime is sketched. Legal and economic aspects of crime are summarized, but the study is mainly sociological. Prevention and correction of criminal behavior are stressed. Local institutions are visited.

2 semester hour credits

S 6 *Penology*

Closely related to the course in Criminology, this subject begins with an historical treatment of the punishment of criminals. Time is devoted chiefly to an understanding of modern methods and problems of dealing with offenders. Field trips are taken to criminal courts and penal institutions.

2 semester hour credits

S 7 *Principles of Social Ethics*

To clarify the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments may be compatible with one's best reflective thought.

2 semester hour credits

S 8 *The Family*

The historical development of the family is first traced, after which the course focuses upon the modern family. The monogamic family is contrasted with other types, and such unconventional forms as companionate and trial marriages are evaluated. Then follows an intensive study of family problems.

A constructive program is presented for strengthening the family as a basic unit in society.

2 semester hour credits

S 9 *Problems in Social Ethics*

Problems arising from differences in moral standards found in the various social groups will be examined. The question of ethical relativism and determinism will be considered. A selected number of specific problems in social ethics will be discussed.

2 semester hour credits

S 10 *Social Progress*

The historical development of the theory of progress, contemporary concepts of social progress, the agents of progress, and the phenomenon of regression are several of the subjects for study. The course is based on Hertzler's *Social Progress*, supplemented with lectures and collateral readings.

2 semester hour credits

S 11 Social Control

The methods by which social forces are controlled provide the fundamental material of the course. External and internal types of control of the social organism are discussed. The use of violence, the power of public opinion, and the application of certain principles of social psychology are examined.

2 semester hour credits

S 12 Sociology of Religion

Religious beliefs, practices, and institutions are examined and evaluated in relation to their effects upon society at large. The great religions of the world are compared in the light of their contributions to the well-being and progress of mankind. The social creeds of the several leading denominations in America are discussed with respect to their attitudes towards race, industry, war, and other social problems. The influences of organized religion upon politics and educational institutions are given attention.

2 semester hour credits

S 13 Population Problems

Population pressure, contrasts between urban and rural population, migration, and pertinent types of social mobility are studied in this course. After a brief survey of population problems in several areas of Europe and the Orient, attention is then given to a careful analysis of population conditions in the United States. The many factors are shown which intensify the problem in our country in spite of its wide area. What principles have superseded those of Malthus? What immigration policies are most sound for our country in the long run? What methods can be adopted which will relieve the population pressure in our great cities? Such questions as these will be discussed.

2 semester hour credits

S 14 Urban Sociology

Upon studying the complex human society found in the various cities of the world, this course then turns to an analysis of the modern American city. Its types, social values, and pathological elements are discussed. Methods of city planning are considered. The belief on the part of some sociologists that democracy is doomed by its cities is examined in the light of typical problems of urban society.

2 semester hour credits

Theses

A thesis in the College of Liberal Arts is considered to be an essay involving the statement, analysis, and solution of some problem in a special field. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of the candidate. A mere resume of existing knowledge in some subject is not acceptable. This, it is true, must usually be made, but in addition thereto the student must show his ability to deal constructively with the data he has collected and his power to draw significant and reliable conclusions from his investigations. The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the Major Departments interested and then forwarded to the Secretary of the Day Division. Final approval of the thesis rests with the Dean. When it is accepted, the thesis becomes the property of the college and is not so be printed, published, nor in any other way made public except in such manner as the Professional Department and the Dean shall jointly approve.

Theses are not required of seniors in the College of Liberal Arts. To certain students who wish to do so, however, the privilege of writing a thesis may be granted by the Faculty Committee on Theses in accordance with the following regulations:

1. To be eligible to write a thesis a student must have attained a scholastic average of at least 2.0 or better through his middler year and the first half of his junior year.
2. Students who have met this minimum requirement may petition for the privilege of substituting a thesis for formal classroom work.
3. In his petition the student must state the subject which he proposes to investigate and give a brief statement of the purpose and scope of the proposed thesis.
4. Petitions for the privilege of writing theses must be submitted in writing to the head of the student's Major Department not later than the middle of the second term of the junior year.

NORTHEASTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS

Courses of Instruction

1940-1941

Course Number	Course	Semester Hours
BIOLOGY		
B 1	General Zoology.....	3
B 2	General Botany.....	3
B 3	Invertebrate Zoology.....	2
B 4	Invertebrate Zoology.....	2
B 5	Vertebrate Zoology.....	2
B 6	Vertebrate Zoology.....	2
B 7	Animal Physiology.....	2
B 8	Genetics.....	2
B 9	Animal Histology.....	2
B 10	Animal Histology.....	2
B 11	Vertebrate Embryology.....	2
B 12	Vertebrate Embryology.....	2
B 13	Mammalian Anatomy.....	2
B 14	Mammalian Anatomy.....	2
B 15	Histological Technique.....	2
B 16	Histological Technique.....	2
B 17	History of Biology.....	2
CHEMISTRY		
Ch 1	Inorganic Chemistry.....	4
Ch 2	Inorganic Chemistry.....	4
Ch 3	Inorganic Chemistry.....	4
Ch 4	Inorganic Chemistry.....	4
Ch 9	Qualitative Analysis.....	3
Ch 11	Qualitative Analysis Laboratory.....	2½
Ch 12	Quantitative Analysis.....	2
Ch 13	Quantitative Analysis.....	2
Ch 14	Quantitative Analysis Laboratory.....	1½
Ch 15	Quantitative Analysis Laboratory.....	2
Ch 31	Organic Chemistry I.....	2
Ch 32	Organic Chemistry II.....	2
Ch 33	Organic Chemistry Laboratory I.....	1
Ch 34	Organic Chemistry Laboratory II.....	1
Ch 35	Organic Chemistry III.....	2
Ch 37	Organic Chemistry Laboratory III.....	2
Ch 40	Physical Chemistry I.....	3

Courses of Instruction

Course Number	Course	Semester Hours
CHEMISTRY (Continued)		
Ch 41	Physical Chemistry II.....	3½
Ch 42	Physical Chemistry III.....	3½
Ch 48	Colloidal Chemistry.....	2½
Ch 51	Sources of Information.....	1
Ch 52	History of Chemistry.....	2
Ch 63	Advanced Chemistry.....	2½
Ch 64	Advanced Chemistry.....	2½
Ch 65	Thesis.....	3
Ch 66	Thesis.....	4
CO-ORDINATION		
C 11	Vocational Conference.....	½
C 12	Vocational Conference.....	½
ECONOMICS		
Ec 3	Economic Principles.....	2
Ec 4	Economic Principles.....	2
Ec 5	Economic Problems.....	2
Ec 6	Economic Problems.....	2
Ec 7	Money and Banking.....	2
Ec 11	Labor Problems.....	2
Ec 12	Economic Systems.....	2
Ec 13	Business Cycles.....	2
Ec 14	International Economic Relations.....	2
Ec 15	History of Economic Thought.....	2
Ec 16	Advanced Economic Theory.....	2
Ec 17	Statistics.....	2
Ec 18	Statistics.....	2
EDUCATION		
Ed 1	History of Education.....	2
Ed 2	History of Education.....	2
Ed 3	Educational Organization and Administration.....	2
Ed 4	Educational Measurements.....	2
Ed 7	Comparative Education.....	2
Ed 9	Educational Sociology.....	2
Ed 10	Educational Philosophy.....	2

Courses of Instruction

Course Number	Course	Semester Hours
ENGLISH		
E 1-A	English I.....	3
E 2-A	English I.....	3
E 7	Creative Writing.....	2
E 8	Creative Writing.....	2
E 9	Journalism I.....	3
E 10	Journalism I.....	3
E 11	Journalism II.....	3
E 12	Journalism II.....	3
E 13	Effective Speaking.....	1
E 14	Effective Speaking.....	1
E 15	Survey of English Literature.....	3
E 16	Survey of English Literature.....	3
E 17	English Drama Before Shakespeare....	2
E 18	Chaucer.....	2
E 19	Shakespeare.....	2
E 20	Shakespeare.....	2
E 21	Nineteenth Century Poetry I.....	2
E 22	Nineteenth Century Poetry II.....	2
E 23	Seventeenth and Eighteenth Century Prose.....	2
E 24	Nineteenth Century Prose.....	2
E 25	American Literature to 1860.....	2
E 26	American Literature After 1860.....	2
E 27	History of the English Novel.....	2
E 28	History of the English Novel.....	2
E 29	Great European Writers.....	2
E 30	Great European Writers.....	2
E 31	Comparative Drama.....	2
E 32	Comparative Drama.....	2
E 33	Modern Literature 1895-1915.....	2
E 34	Post-war Literature.....	2
FRENCH		
F 1	Elementary French.....	3
F 2	Elementary French.....	3
F 3	Intermediate French.....	3
F 4	Intermediate French.....	3
F 5	Advanced French.....	3
F 6	Advanced French.....	3
F 7	French Classicism.....	2
F 8	French Classicism.....	2
F 9	French Romanticism.....	2
F 10	French Romanticism.....	2

Courses of Instruction

Course Number	Course	Semester Hours
GEOLOGY		
Gy 1	General Geology.....	2
Gy 2	General Geology.....	2
Gy 5	Historical Geology.....	2
Gy 6	Historical Geology.....	2
GERMAN		
G 1	Elementary German.....	3
G 2	Elementary German.....	3
G 3	Intermediate German.....	3
G 4	Intermediate German.....	3
G 5	Advanced German.....	3
G 6	Advanced German.....	3
G 7	The Classical Period of German Literature.....	2
G 8	The Classical Period of German Literature.....	2
G 9	German Literature of the Nineteenth Century.....	2
G 10	German Literature of the Nineteenth Century.....	2
GOVERNMENT		
Gv 1	American Government and Politics...	2
Gv 2	American Government and Politics...	2
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H 6	Europe, 1870-1938.....	2
H 7	England to 1688.....	2
H 8	England Since 1688.....	2
H 9	The United States to 1865.....	2
H 10	The United States Since 1865.....	2
H 11	Latin American History.....	2
H 12	Latin American History.....	2

Courses of Instruction

Course Number	Course	Semester Hours
MATHEMATICS		
M 1	College Algebra.....	3
M 3	Trigonometry.....	2
M 4	Analytic Geometry and Introduction to Calculus.....	5
M 5	Differential Calculus.....	3
M 6	Integral Calculus.....	3
M 7	Differential Equations I.....	2½
M 8	Differential Equations II.....	3
M 9	Higher Algebra.....	3
M 10	Curve Analysis.....	3
M 11	Solid Analytic Geometry.....	3
M 12	Modern Geometry.....	3
M 13	Spherical Trigonometry.....	3
M 14	History of Mathematics.....	2
M 15	Advanced Calculus.....	3
M 16	Advanced Calculus.....	3
M 17	Series.....	3
M 18	Theory of Equations.....	3
PHILOSOPHY		
Ph 1	Introduction to Philosophy.....	2
Ph 2	Problems of Philosophy.....	2
Ph 3	History of Philosophy.....	2
Ph 4	History of Philosophy.....	2
Ph 5	Philosophy of Religion.....	2
Ph 6	Logic.....	2
PHYSICAL EDUCATION		
PE 2	Hygiene.....	1
PE 3-4	Physical Training.....	0
PE 5	Principles of Physical Education.....	2
PE 6	Play and Recreation.....	2
PE 7	History of Physical Education.....	2
PE 8	Administration of Physical Education.....	2
PE 9	Football.....	2
PE 11	Track and Field Events.....	2
PE 12	Basketball and Baseball.....	2

Courses of Instruction

Course Number	Course	Semester Hours
PHYSICS		
P 1-A	Survey of the Physical Sciences	4
P 2-A	Survey of the Physical Sciences	4
P 1	Physics I	3
P 2	Physics I	3
P 3	Physics II	2
P 4	Physics II	2
P 5	Physics Laboratory	1
P 6	Physics Laboratory	1
P 9	Optics	3
P 10	Optics	3
P 13	Acoustics	3
P 14	Acoustics	3
P 15	Modern Physics	3
P 16	Modern Physics	3
ME 20	Applied Mechanics (Statics)	3
ME 21	Applied Mechanics (Kinetics)	3
ME 30	Thermodynamics	3
EL 13	Electrical Measurements I	2½
EL 14	Electrical Measurements II	2
EL 21	Electrophysics	1
EL 22	Electrophysics	2
EL 23	Electrical Measurements Laboratory . .	2
EL 24	Advanced Measurements Laboratory . .	2
PSYCHOLOGY		
Ps 1	Introduction to Differential Psychology	2
Ps 2	General Psychology	2
Ps 5	Educational Psychology	2
Ps 6	Educational Psychology	2
Ps 7	Social Psychology of Everyday Life . . .	2
Ps 8	Social Psychology, Theory and Methods	2
Ps 9	Psychology of Personality	2
Ps 10	Abnormal Psychology	2
SOCIOLOGY		
S 1	Introduction to Sociology	2
S 2	Principles of Sociology	2
S 3	Social Problems	2

Courses of Instruction

Course Number	Course	Semester Hours
SOCIOLOGY (Continued)		
S 4	Social Pathology.....	2
S 5	Criminology.....	2
S 6	Penology.....	2
S 7	Principles of Social Ethics.....	2
S 8	The Family.....	2
S 9	Problems in Social Ethics.....	2
S 10	Social Progress.....	2
S 11	Social Control.....	2
S 12	Sociology of Religion.....	2
S 13	Population Problems.....	2
S 14	Urban Sociology.....	2

Laboratory Equipment

Chemistry Laboratories and Equipment

The Hayden Memorial Laboratories

The Chemical Laboratories, located on the fourth floor of the West Building and embodying the most recent developments in materials and design, were given to the University by the Charles Hayden Memorial Fund. The laboratories are adequately equipped for undergraduate instruction in the major branches of chemistry and consist of the following units: (1) General Chemistry and Qualitative Analysis Laboratory, (2) Organic Chemistry Laboratory, (3) Quantitative Analysis and Physical Chemistry Laboratory, (4) Research Laboratories, (5) Dark Room for Photography, and (6) Service Rooms.

General Chemistry and Qualitative Analysis Laboratory

This large and well-lighted laboratory is fully equipped for giving instruction in these undergraduate courses. A hydrogen sulfide room, a well-equipped balance room, a coat closet, and a conference room are a part of this unit.

The laboratory tables are made of light oak and have alberene stone tops. The usual services including water, gas, A.C. and D.C. electricity, and steam are available to the students. The large and well-illuminated fume hoods are of the open front construction type with a special built-in drying cabinet in the base. This cabinet is so constructed that a draft of filtered air is drawn in through screened holes at the base and then passes into the fume exhaust. The hoods are supplied with water, gas, steam, steam cones, 110 V. A.C., 115-230 V. D.C., and also variable D.C. supplied by a battery system.

Organic Chemistry Laboratory

This laboratory is adequately equipped for undergraduate courses in preparation of organic compounds and qualitative organic analysis. The laboratory furniture is made of light oak with alberene stone tops and so arranged that each student has a working space of about six feet. A sink and steam cone are available for each student as well as water, steam, gas, and electricity.

Eight large fume hoods, made of Sheldine stone with leadclad steel bases, enable the student to work in a clean atmosphere. The hoods are well illuminated and contain the same services as the assigned table units. The bases of the hoods serve as drying cabinets and are well insulated to make working conditions at the hood more comfortable.

A large evaporator unit made of alberene stone with ceramic baths, stainless steel tops, and concentric rings facilitates evaporation operations. Provision is made for twenty-seven simultaneous evaporations, arranged in three tiers of nine units. The source of heat is steam. A special overhead glass plate provides for the draining away of overhead condensate to prevent contamination of the solutions being evaporated.

A multiple-unit organic combustion furnace, an ice storage chamber, an ice crusher, cork presses, a Fisher micro-melting point apparatus, a saccharimeter, and other accessories needed in these courses are available.

Quantitative Analysis and Physical Chemistry Laboratory

The laboratory tables and fume hoods are similar to those in the Organic Chemistry Laboratory. Abundant drying cabinet space is available in the hood bases. A large evaporator unit, similar to that in the Organic Chemistry Laboratory, and a sand bath built into one of the hoods provide ample space for evaporations. A large Freas drying oven is available for the drying of analytical samples. The balance room is of modern design and well illuminated by indirect lighting.

A small laboratory, adjacent to the Quantitative Analysis Laboratory, is used for technical analyses such as the determinations of coals, vegetable oils, lubricating oils, gasolines, dairy products, textiles, rubber, and other industrial materials.

Some of the equipment available for this type of work includes the following: a standard A.S.T.M. gasoline distillation apparatus, a closed cup and an open cup flash and fire point apparatus, a Conradson carbon residue apparatus, a muffle furnace, an Abbé refractometer, a three objective B. & L. microscope with an oil-immersion objective, a Kjeldahl distillation outfit, a combustion furnace for iron and steel determinations, rheostats, voltmeters, ammeters, etc. This technical analysis laboratory has a fume hood and several working tables with all the necessary services such as water, gas, steam, vacuum, 110 V. A.C., 115-230 V. D.C. and several variable D.C. circuits supplied from a series of batteries through a distribution panel.

A special laboratory is available for electrolytic work such as potentiometric determinations, electrometric titrations, electrolytic analyses of metals, etc. For this work the equipment includes two L. and N. student potentiometers, a Wilkens-Anderson electrolytic machine, and all the accessories necessary.

The electric current distribution panel, specially designed at the University and constructed by the Holtzer-Cabot Company, is located in this electrolytic laboratory. The current available for distribution at this panel is variable D.C. (2-32 V.) and 115-230

V. D.C. A built-in tungar charger enables the batteries to be kept fully charged at all times. The battery system is located in a separate battery room adjacent to the electrolytic laboratory.

The physical Chemistry Laboratory contains working benches equipped with water, gas, and electricity. A special table containing a thermostat and having D.C. and A.C. connections is used for experiments requiring these services. Apparatus is available for performing experiments on the properties of gases and liquids, thermochemical measurements, and conductivity of solutions. A supply of electrical instruments and special thermometers enables a wide range of special tests to be made as directed.

Research Laboratories

The Chemistry Department has three research laboratories equipped with A.C. and D.C., water, gas, and steam. In one laboratory work can be done on the electrical properties of solutions, solubility effect, and other physical chemistry phenomena. Another laboratory is equipped for work in organic chemistry, and the third can be used for research in analytical or physical chemistry. Electrical instruments and glass apparatus of various types are available for use in the laboratories.

Dark Room Equipment

The photographic dark room is equipped with all the common accessories necessary in photography. A copying camera is available and is especially useful in the making of lantern slides for instructional purposes. An Ellwood enlarger taking a negative as large as 5 x 7 inches, siphon print washers, and several safe lights with interchangeable green, amber, and red filters are available. The room is equipped with gas, electricity, water and distilled water. A large light-proof fan gives adequate ventilation.

Service Rooms

The service rooms consist of the following units: (1) the stock room supplying the main laboratories; (2) storage rooms on the fourth floor for the operating supply of chemicals and apparatus; (3) storage rooms in the basement for the main supply of chemicals and apparatus; (4) solution room; and (5) preparation rooms adjacent to all main lecture rooms.

The stock room is centrally located to feed all the main laboratories. The wall tables, adjacent to the service windows leading into each laboratory, are stocked with the materials necessary for the servicing of those laboratories. The still, for the making of distilled water, and a large storage tank are located in the stock room. The water is piped from this tank into the various laboratories, solution room, and dark room. The distilled water outlets are tin-lined, self-closing bibcocks. Aluminum piping is used throughout.

A storage room for alcohol and inflammable solvents, a storage room for chemicals, and a storage room for apparatus maintain an adequate supply of materials for this stock room. These storage rooms are all connected to the stock room.

The solution room is fully equipped with a laboratory table, a hood, and all the necessary services including distilled water. There is ample shelf room for maintaining a complete supply of chemicals necessary for the preparation of solutions needed in the various laboratory courses.

The two large and well-ventilated storage rooms in the basement are used for storing the main bulk of chemical and apparatus supplies. A freight elevator makes these rooms readily available to the stock room on the fourth floor.

The preparation rooms adjoining lecture halls are equipped with working tables, hoods, and steel storage cabinets. All materials necessary for setting up of lecture demonstrations are stored in these rooms. Tables mounted on wheels are used for carrying the set-up demonstrations into the lecture room.

Visual Education Equipment

Classroom instruction is made more effective by the use of motion pictures and lantern slides. For this purpose there are available projectors for 16 mm. and 35 mm. films. Complete sound motion picture apparatus is also available. New and powerful Delineascopes project the lantern slides. Stationary as well as portable day light screens enable students to take notes while viewing the pictures.

Statistics Laboratory

Students have available for laboratory work in statistics all the commonly used office machines. Principal pieces of equipment include duplicators, typewriters, hand and electric calculators, and both hand and electric adding machines. The laboratory is in charge of a graduate assistant whose work is to maintain the equipment in excellent condition and to give instruction in the use of the various machines.

Biological Laboratory

The Biological Laboratory, a large, well-lighted room containing six dissecting tables, can accommodate thirty-six students.

General equipment includes simple and compound microscopes, binocular dissecting microscopes, microscopical stains, staining solutions, physiological preparations, reagents, chemicals, and glassware.

The zoological collection is especially good. It includes a complete series of invertebrate and vertebrate specimens for dissection and also various demonstration specimens. Among these are complete series of sponges, corals, flat worms, round worms, echinoderms, annelids, mollusks, arthropods, insects, and chordates; a set to demonstrate the general survey of the animal kingdom; a series of heart models of different types of vertebrates and human heart; a series of brain models of the most important vertebrate groups; a set of models to demonstrate the various cell types from human tissues; a set of models to demonstrate the principal steps in somatic mitosis; various other models of invertebrates and vertebrates; zoological dissections in museum jars; skeletal preparations of the most important vertebrate groups; and a complete series of Leuckhart zoological charts.

The histological collection consists of some four hundred mounted microscopical specimens illustrating various forms of invertebrate, vertebrate, and plant tissues, while the botanical collection includes a complete series of both preserved and mounted botanical specimens.

Physics Laboratories

General Laboratory

The General Laboratory is fully equipped with large working tables, each provided with gas, alternating current, and direct current. Some also have water supplies for such experiments as require a constant flow. A separate balance room, a spectrometer room, a photographic room, and a photometer room are directly connected with this laboratory. A large amount of apparatus for all of the usual physics experiments is available so that the students may work alone thus gaining confidence in laboratory technique. The students work in groups only when the experiment requires more than one person for its proper operation.

Advanced Laboratory

This laboratory is designed with a view both to precision and flexibility. A special switchboard provides single phase and polyphase alternating current and a variety of direct current potentials to be fed around to various working points. Two separate research rooms and a workshop with lathe, drill press, grinder, and a full set of tools complement the laboratory. Typical of the equipment available are a General Radio impedance bridge, high frequency bridge, wave analyzer, cathode ray oscillograph, and vacuum tube voltmeter, together with standards of resistance, inductance, and capacity manufactured by the same company. A communications type radio receiver, and a large number of meters, amplifiers, discharge tubes, and vacuum tubes are available for electrical work.

In the field of light there are spectrometers, photometers, photocells, a Zeiss ECE330 microscope, polarizing equipment, projectors, etc. A Central Scientific cathetometer measuring to 0.05 mm. over a 97 cm. length is used for precision measurement of large objects. Vacuum pumps, blower, and large amounts of auxiliary apparatus give a well rounded set of equipment for the Advanced Laboratory courses and for research.

Astronomy Laboratory

This laboratory is in the penthouse of the West Building, close to a platform on the roof which gives a very good view free from obstructions. Equipment is available for the grinding of mirrors and the constructing of telescopes, and students are encouraged to build their own instruments. The Astronomy Club holds evening meetings in the laboratory regularly throughout the college year. The Club has made a good start in building up a library in its special field for the use of its membership.

Radio Laboratory

This is also in the penthouse of the West Building and is a completely shielded room high up from the street. Three masts support three horizontal antennae and a vertical ultra high frequency doublet. The transmitters operate on both radio-telephone and radiotelegraph as permitted in the amateur bands by the Federal Communications Commission. The maximum allowable power is available on all bands except the ultra high frequency ones. Full controls and safety devices make the operation simple and without hazard to the operators. Facilities are provided for research. The Radio Club uses this laboratory and supplies most of the operators.

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OFFICE HOURS
DEPARTMENT OF ADMISSIONS
9 A.M. to 4 P.M. daily
Saturday 12.00 N'N
Wednesday Evenings by
Appointment

Northeastern University

College of Liberal Arts

Paste a Small
Photo or
Snapshot
in This Space

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass.....19

To Director of Admissions:

I (Name in full)
hereby respectfully apply for admission to the College of Liberal Arts to
major in the field checked:

- | | |
|--|--|
| <input type="checkbox"/> Biology | <input type="checkbox"/> English |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Sociology and Economics |
| <input type="checkbox"/> Mathematics and Physics | <input type="checkbox"/> Pre-Legal |

for the school period beginning19....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence Street
Town or City
State Tel.
Date of Birth Age
Place of Birth
Race Religion Nationality
Graduate of High School, Year
Location of High School
Name of Principal
Other high schools you have attended
Names of Principals
If not a graduate, state the years of attendance and why you left
Father's, Mother's, or Guardian's Name
Address
Father's work, business or profession
Names and addresses of two other persons, to whom we may direct inquiries concerning you.
.....
.....

Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

.....
.....
.....

Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

.....

Name of person who will furnish transcript of your college record.....

.....

Do you expect advance credit for past collegiate work?.....

.....

List all athletics and other extra curricula high school activities you

have engaged in.....

.....

.....

.....

Names and addresses of all past employers with brief description of

each job, length of employment, and wages received:.....

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Date.....

Milton J. Schlagenhauf, Director of Admissions
Northeastern University
360 Huntington Avenue
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

.....

.....

.....

.....

.....

.....

.....

.....

Name.....

Street and Number.....

Town or City.....

State.....

Northeastern University

DAY DIVISION

COLLEGE OF
ENGINEERING

1940-1941



BOSTON, MASSACHUSETTS

January, 1940

NORTHEASTERN UNIVERSITY

DAY DIVISION

COLLEGE OF ENGINEERING

Conducted on the Co-operative Plan

Catalogue for 1940-1941

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Freshman Calendar, 1940-1941

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JANUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

MARCH

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Days on which college exercises are held are indicated thus: **1, 2, 3.**

Sundays, holidays, and vacations are indicated thus: **1, 2, 3.**

Upperclass Calendar, 1940-1941

SEPTEMBER

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	9	10	11	12	13	14
⑮	16	17	18	19	20	21
⑳	23	24	25	26	27	28
㉑	30					

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
⑥	7	8	9	10	11	⑫
⑬	14	15	16	17	18	19
⑳	21	22	23	24	25	26
㉑	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
③	4	5	6	7	8	9
⑩	11	12	13	14	15	16
⑰	18	19	20	21	22	23
㉒	25	26	27	㉓	29	30

DECEMBER

S	M	T	W	T	F	S
①	2	3	4	5	6	7
⑧	9	10	11	12	13	14
⑮	16	17	18	19	20	21
㉒	23	24	㉓	26	27	28
㉑	30	31				

JANUARY

S	M	T	W	T	F	S
			①	2	3	4
⑤	6	7	8	9	10	11
⑫	13	14	15	16	17	18
⑰	20	21	22	23	24	25
㉒	27	28	29	30	31	

FEBRUARY

S	M	T	W	T	F	S
						1
②	3	4	5	6	7	8
⑨	10	11	12	13	14	15
⑮	17	18	19	20	21	㉒
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㉑	31					

APRIL

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㉒	28	29	30			

MAY

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⑮	12	13	14	15	16	17
⑰	19	20	21	22	23	24
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JUNE

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JULY

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AUGUST

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Days on which Division A students are in college are indicated thus: 1, 2, 3.

Days on which Division B students are in college are indicated thus: 1, 2, 3.

1 Sundays, holidays, and summer periods are indicated thus: ①, ②, ③.

Calendar for the College Year, 1940-1941

1940

- AUGUST 28 *Wednesday*. Entrance condition examinations.
- SEPTEMBER 2 *Monday*. Labor Day. (College exercises omitted.)
- SEPTEMBER 5 *Thursday*. Registration and opening of college for freshmen. Students failing to register promptly on September 5 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 9 *Monday*. Opening of college for Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- OCTOBER 12 *Saturday*. Columbus Day. (College exercises omitted.)
- NOVEMBER 18 *Monday*. Opening of college for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- NOVEMBER 27 *Wednesday*. College exercises omitted after 1:00 p.m.
- NOVEMBER 28 *Thursday*. Thanksgiving Day. (College exercises omitted.)
- DECEMBER 24 *Tuesday*. College exercises omitted after 1:00 p.m.
- DECEMBER 25 *Wednesday*. Christmas Day. (College exercises omitted.)
- DECEMBER 23 }
JANUARY 4 } Vacation for freshmen.

1941

- JANUARY 1 *Wednesday.* New Year's Day. (College exercises omitted.)
- JANUARY 27 *Monday.* Second semester begins for freshmen and Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- FEBRUARY 22 *Saturday.* Washington's Birthday. (College exercises omitted.)
- APRIL 5 *Saturday.* College year ends for Division A upperclassmen.
- APRIL 7 *Monday.* Second semester begins for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- MAY 24 *Saturday.* College year ends for freshmen.
- MAY 30 *Friday.* Memorial Day. (College exercises omitted.)
- JUNE 14 *Saturday.* College year ends for Division B upperclassmen.
- JUNE 15 *Sunday.* Baccalaureate Sermon.
- JUNE 16 *Monday.* Commencement.
- JUNE 17 *Tuesday.* Bunker Hill Day. (College exercises omitted.)
- JULY 4 *Friday.* Independence Day. (College exercises omitted.)
- SEPTEMBER 1 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 4 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 5 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 8 *Monday.* Opening of college year 1941-1942.

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THORNTON W. BURGESS

AUTHOR

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J. ANTON DE HAAS

PROFESSOR OF INTERNATIONAL RELATIONSHIPS, HARVARD UNIVERSITY

"Where Do We Go From Here?"

LLOYD C. DOUGLAS

AUTHOR, LECTURER

"Experiences of an Author"

H. V. KALTENBORN

AUTHOR, NEWS COMMENTATOR

"Kaltenborn Edits the News"

JAMES M. LANDIS

DEAN, HARVARD UNIVERSITY LAW SCHOOL

"The Securities and Exchange Commission"

HENRY CABOT LODGE, JR.

UNITED STATES SENATOR FROM MASSACHUSETTS

"The National Outlook"

HARRY A. OVERSTREET

HEAD, DEPARTMENT OF PHILOSOPHY AND PSYCHOLOGY

COLLEGE OF THE CITY OF NEW YORK

"Ten Ways to Reach Wrong Conclusions"

G. BROMLEY OXNAM

BISHOP, METHODIST EPISCOPAL CHURCH

"A Date with the World"

J. EDGAR PARK

PRESIDENT, WHEATON COLLEGE

"The Secret of Success"

JAMES H. POWERS

OF THE BOSTON GLOBE EDITORIAL STAFF

"The Engineer in the New World"

HARLOW SHAPLEY

ASTRONOMER, LECTURER

"What Makes the Stars Shine"

RALPH W. SOCKMAN

MINISTER, CHRIST CHURCH, NEW YORK CITY

"The New Patriotism"

ALLEN A. STOCKDALE

EDITOR, CLERGYMAN, LECTURER

"The Future of America"

MAURICE J. TOBIN

MAYOR OF BOSTON

"City Government"

EDWARD A. WEEKS, JR.

EDITOR, THE ATLANTIC MONTHLY

"An Editor Faces an Angry World"

Chapel Preachers

DR. CHARLES N. ARBUCKLE
MINISTER, FIRST BAPTIST CHURCH, NEWTON

DR. RICHARD H. BENNETT
MINISTER, PAYSON PARK CHURCH, BELMONT

DR. EDWIN PRINCE BOOTH
PROFESSOR OF CHURCH HISTORY, BOSTON UNIVERSITY SCHOOL OF THEOLOGY

REVEREND ROBERT WOOD COE
MINISTER, LEYDEN CONGREGATIONAL CHURCH, BROOKLINE

DR. FRANK E. DUDDY
MINISTER, NORTH CONGREGATIONAL CHURCH, CAMBRIDGE

RABBI LOUIS M. EPSTEIN
RABBI, TEMPLE KEHILLATH ISRAEL

DR. NEWTON C. FETTER
MINISTER TO BAPTIST STUDENTS IN GREATER BOSTON

DR. C. LESLIE GLENN
MINISTER, CHRIST CHURCH, CAMBRIDGE

REVEREND WILLIAM H. GYSAN
MINISTER TO UNITARIAN STUDENTS IN GREATER BOSTON

DR. CHARLES W. HAVICE
EXECUTIVE SECRETARY, NORTHEASTERN STUDENT UNION

DR. ARTHUR L. KINSOLVING
MINISTER, TRINITY CHURCH, BOSTON

REVEREND CARL H. KOPF
MINISTER, MOUNT VERNON CHURCH, BOSTON

DR. ASHLEY D. LEAVITT
MINISTER, HARVARD CONGREGATIONAL CHURCH, BROOKLINE

DR. ELMER A. LESLIE
PROFESSOR OF HEBREW AND OLD TESTAMENT LITERATURE, BOSTON UNIVERSITY

DR. BOYNTON MERRILL
MINISTER, SECOND CHURCH, NEWTON

REVEREND SAMUEL H. MILLER
MINISTER, OLD CAMBRIDGE BAPTIST CHURCH, CAMBRIDGE

DR. PHILLIPS E. OSGOOD
MINISTER, EMMANUEL CHURCH, BOSTON

FATHER THOMAS R. REYNOLDS
PRIEST, ST. MATTHEW'S CHURCH, DORCHESTER

THE RT. REVEREND HENRY KNOX SHERRILL
BISHOP, EPISCOPAL CHURCH

DR. FRANCIS L. STRICKLAND
PROFESSOR OF THE HISTORY AND PSYCHOLOGY OF RELIGION, BOSTON UNIVERSITY

DR. G. CAMPBELL WADSWORTH
MINISTER, CHURCH OF THE COVENANT, BOSTON

Northeastern University

General Statement

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the

New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools — the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the Evening Division of the

College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The Evening Division of the College of Liberal Arts offers an evening program the equivalent in hours to one-half of the requirements for the A.B. or B.S. degree, providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

Northeastern University and Affiliated Schools

Statistical Summary

1938-1939

	Administrative Officers and Faculty	Students
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	103	2112
College of Engineering		
College of Business Administration		
School of Law	50*	1461*
School of Business	105*	1550*
Evening Division, College of Liberal Arts	4**	33**
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Technical Institute	38	532
Lincoln Preparatory School	19	437
Huntington Day School for Boys		
Regular Term	16	171
Summer Term	10	146
	<hr/>	<hr/>
Total	353	6442
Less Duplicates	42	403
	<hr/>	<hr/>
	311	6039

*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

**The Evening Division of the College of Liberal Arts admitted students for the first time in September 1938.

The Co-operative Plan

How It Works

THE co-operative plan works in the following manner. Upperclassmen are divided into two nearly equal groups, one of which is called Division A and the other Division B. Each man is assigned a job with some business or industrial concern. So far as possible each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. In September the Division A student returns to the University for ten weeks of classroom work. At the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year so that an upperclassman has annually twenty weeks at college, twenty-six weeks at co-operative work, and six weeks of vacation.

Faculty Co-ordinators

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in an agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

Placement

The co-ordinator visits co-operative firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide,

including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

Supervision and Guidance

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by common agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which shall afford the student practical experience, give meaning to his program of study, and train him in reliability, efficiency, and team work.

Correlation of Theory and Practice

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for *at least one year* after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class do remain with their co-operating employers after graduation.

Co-operative Work Reports

The values to be derived from the practical experiences are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

Co-operative Work Records

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

Positions Available

Because of uncertainties of business conditions, as well as other reasons beyond its control, the University cannot and does not guarantee to place students. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups and students who are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

Earnings

The rates of pay for students tend to be low because students are given the privilege of attending college on the Co-operative Plan and because effort is made to provide the student with the opportunity of being transferred, at reasonable intervals, from one department to another of the co-operating company. It should be understood that the primary purpose of the Co-operative Plan is training.

The minimum rates of pay will be governed to a very large extent by prevailing wages-and-hours laws. To assist the student in budgeting his expenses, however, the following scale of wages may be considered as minimum rates received by students in times of normal business.

\$12 per week for second year students

\$14 per week for third year students

\$16 per week for fourth and fifth year students

Statistical records show that the pay actually received by students averages appreciably above these figures.

Location of Work

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

Types of Co-operative Work

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament, and other personal

qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.

For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering firms, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

Typical Co-operative Training Schedules

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

BOSTON & MAINE RAILROAD CO.

ONE YEAR — Erecting Shop

ONE YEAR — Machine Shop

ONE YEAR — General work in Machine Shop and Erecting Shop

ONE YEAR — Mechanical Engineer's Dept.

BOSTON EDISON COMPANY

The schedule of the Boston Edison Company is divided into the following general classifications. Very few co-operating students obtain experience in all branches, but students progress from year to year in the respective branches as conditions require.

Standardizing

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

Steam Practice

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

Electrical Testing

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

Chemical Engineering

- (a) Fuel analysis
- (b) Miscellaneous tests and analysis of oils, water paints, and other materials

*Photography**Office Work*

HUNT-SPILLER MANUFACTURING CORPORATION

- ONE YEAR General laboratory and plant work, including preparation of samples
- Pyrometry
- Use and care of Metallurgical apparatus
- ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.
- ONE YEAR Keeping of general metallurgical records, filing, and making of reports
- ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

PEPPERELL MANUFACTURING COMPANY

- ONE YEAR Stock Records
- ONE YEAR Production Analysis
- ONE YEAR Inventory Control

General Information

Tuition

THE tuition for all curricula in the Day Division is \$250 per year, or \$125 per term. Certain fees and deposits are also required as specified in the following paragraphs. A complete statement of tuition and fee payments is given on page 26.

Students who carry academic loads of greater or less than normal amount may pay their tuition on a semester hour basis.

General Library and Materials Fee

All students are charged a general library and materials fee of fourteen dollars *(\$14) each year. This fee is payable at the time of registration and is included in the schedule of payments on page 26.

Student Activities Fee

Each student in the Day Division is charged a student activities fee of sixteen dollars (\$16). This fee is payable at the time of registration and is included in the schedule of payments on page 26. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, *The Northeastern Student Union* and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. If the student shows signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

Chemical Laboratory Deposit

(Applies only to students taking chemical laboratory work)

All students taking chemical laboratory work are required to make a deposit from which deductions are made for breakage, chemicals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the end of the college year. If the charge for such breakage, chemicals, or destruction of apparatus is more than the sum deposited, the student will be charged the additional amount.

Freshmen make a chemical laboratory deposit of ten dollars with their first tuition payment at the beginning of the year; upperclassmen make a chemical laboratory deposit of ten dollars (\$10) at the beginning of each term.

*This fee is twelve dollars (\$12) for students who were enrolled in the Day Division prior to January 1, 1940.

Schedule of Payments for Freshmen

<i>Date Due</i>	<i>Amount</i>	
*September 5, 1940	Tuition	\$125.00
	Fees	30.00
		<hr/>
		\$155.00
February 3, 1941	Tuition	\$125.00

Schedule of Payments for Upperclassmen

	<i>Division A</i>	
*September 9, 1940	Tuition	**\$125.00
	Fees	28.00
		<hr/>
		\$153.00
*January 27, 1941	Tuition	\$125.00
	<i>Division B</i>	
*November 18, 1940	Tuition	**\$125.00
	Fees	28.00
		<hr/>
		\$153.00
*April 7, 1941	Tuition	\$125.00

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Director of School Administration.

Graduation Fee

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid before the end of the seventh week of the second term in the senior year.

Payments

All payments should be made at the treasurer's office. Checks should be made payable to Northeastern University.

*Students taking chemical laboratory work pay a deposit of \$10.00 additional.

**This tuition payment is \$100 instead of \$125 for all upperclassmen enrolled in the College prior to September 1, 1938.

Refunds

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except when students are compelled to withdraw on account of personal illness.

Expenses

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

Estimated College Expenses for a Freshman

Application Fee.....	\$ 5.
Tuition.....	250.
General Library and Materials Fee.....	14.
Chemical Laboratory Deposit.....	10.
Student Activities Fee.....	16.
Books and Supplies.....	35.
	<hr/>
	\$330.

(Engineering students should add approximately \$25 for drawing instruments and equipment.)

Estimated Living Expenses Per Week for a Freshman Residing Away from Home

Room Rent.....	\$ 3.75
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	<hr/>
	\$13.75

The figures given above are approximate and may not exactly apply to any one student; however, they will be found to represent fairly well the expense of a freshman who lives comfortably but without extravagance.

Textbooks and Supplies

The Northeastern University Bookstore, located in the Basement of the West Building, is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

A Northeastern Bookstore Discount Card will be issued to every Day Division student at the time of registration and will entitle him to a ten per cent discount on all Day Division textbooks which he purchases for his own use while in school.

The ten per cent discount will not apply on equipment, supplies or novelties. It will be the policy of the bookstore, however, to stock these materials and to sell them at the lowest possible prices.

Part-Time Work

Students who find it necessary to accept part-time jobs while attending college may obtain such work through the Director of Co-operative Work.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.

Examinations

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations will be given in all subjects during the week of July 7, 1941, for Division A students, and the week of September 1, 1941, for Division B students. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only by vote of the Administrative Committee, and for all such examinations the University requires the payment of a special fee of five dollars (\$5).

Grades

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work towards the Bachelor's degree)

- F failure, removable by condition examination
- FF complete failure (course must be repeated in class)
- I incomplete, used for intermediate grades only to signify that the student has not had time to make up work lost through excusable enforced absence from class
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student, who is required to ascertain when and how the condition can be removed.

Dean's List

A Dean's List, issued at the end of each term, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshman who achieve high scholastic standing are included on a Freshman Honor List, which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

Report Cards

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each term. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain an acceptable quality of college work. Parents and students are always welcomed by the college officers and faculty advisers for conference upon such matters.

Parents or guardians will be notified whenever students are advised or required to withdraw from the University.

Conduct

It is assumed that students come to the University for a serious purpose and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University or persistent neglect of work may be followed by dismissal; if the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

Scholastic Year for Seniors

Seniors of either division who are candidates for a degree in the current year must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

Attendance

Students are expected to attend all exercises in the subjects they are studying unless excused in advance. Exercises are held and students are expected to devote themselves to the work of the University between 9:00 A.M. and 5:00 P.M., except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9:00 A.M. and 1:00 P.M.

No cuts are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. If he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

Housing Regulations

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Director of School Administration, 254W.
3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Director of School Administration to change.
4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments.
5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.
6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

Residence

It has been found to be much more satisfactory for the student to live within easy access of Boston, especially during periods in college, than to live out twenty-five or thirty miles. The saving of time and effort more than offsets any increased expense. Residence in Boston is advisable, as it gives the student opportunity to use the college facilities outside of class hours and to confer more easily with his instructors about his college work.

Dormitories

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue., Boston, Massachusetts.

Buildings and Facilities

Boston—A Great Educational Center

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students.

Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

Location of University Buildings

The Day Division of Northeastern University is housed in three buildings located on Huntington Avenue, Boston, just beyond Massachusetts Avenue and opposite the historic Boston Opera House. The main administrative offices of the University are located in the West Building, a four-story brick structure added to the physical plant of Northeastern in 1938.

Transportation

The chief railroad centers of Boston are the North and South Stations. From the North Station board a car going to Park Street, at which junction transfer to any Huntington Avenue car. At South Station board a Cambridge subway train for Park Street Under. There change to a Huntington Avenue car and alight at the West Building of Northeastern University.

West Building

The West Building contains over 100,000 square feet of floor space for administrative and instructional purposes. In the basement are the Mechanical Engineering offices, laboratories, and machine shops; the University Bookstore; the Husky Hut, where light refreshments are sold; several classrooms; and a large drafting room used chiefly by the Department of Mechanical Engineering. Ample area is also provided in the basement for a student check room, lockers, and various storage rooms and vaults.

On the first floor are located the President's office, the General Offices of the Secretary-Treasurer, and the offices of the Vice-President of the University. A large public reception room adjoins the main lobby, and several small classrooms are located in both wings of the building. This floor was given to the University in memory of Lieutenant Stafford Leighton Brown by his mother.

The Department of Physics has a suite of offices, laboratories, and research areas in the south wing of the second floor. A large lecture hall with raised seats accommodating over three hundred people occupies the central area of the second floor. This room is fully equipped for both lantern slide and motion picture projection, and is provided with up-to-date motor driven ventilating equipment. The room is fitted with a lecture demonstration desk having all necessary accessories including gas, water, various types of electricity, and hoods for the removal of gases. A fully stocked preparation room adjoins this lecture hall. The offices of the Director of School Administration, the Director of Co-operative Work, and the Dean of Students, a large number of small classrooms, and several conference rooms complete the layout of the second floor.

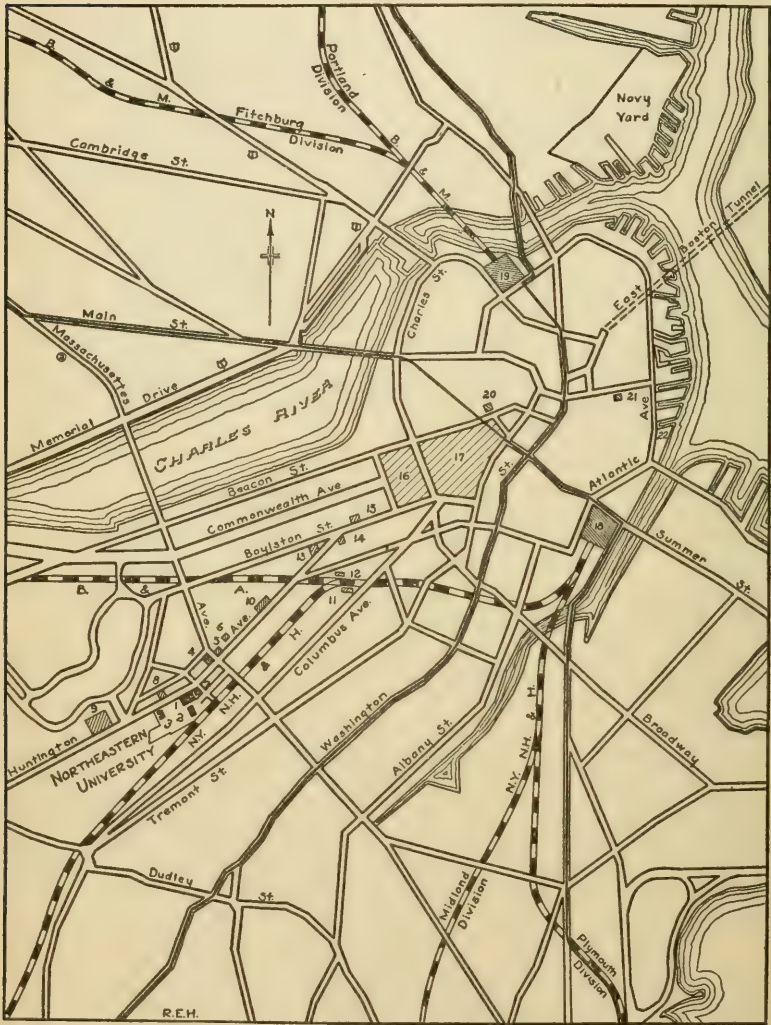
Student lounging and recreation rooms sponsored by the Northeastern Student Union occupy the Huntington Avenue side of the third floor, together with the offices of the Department of Student Activities. This floor also contains a small University Chapel, a lecture hall similar to that on the second floor but slightly smaller, and a number of large classrooms equipped with special tables for freshman drawing classes.

A group of large, fully equipped laboratories for Inorganic Chemistry and Qualitative Analysis, Physical Chemistry and Quantitative Analysis, and Organic Chemistry occupy the principal areas of the fourth floor. The Chemistry Department has its offices and a large lecture hall equipped especially for courses in chemistry adjoining these laboratories. A number of research areas for special purposes, a large central stockroom, a dark room, and several balance rooms complete the chemistry suite. Three large drafting rooms having blackboards especially equipped with sliding T-squares, an Art Room, and the offices of the Drawing Department, are also found on the fourth floor.

In the penthouse on the roof there are a faculty-alumni lounge, a radio laboratory, and an astronomy laboratory.

South Building

The South Building of Northeastern University comprises a basement and two stories. The Department of Electrical Engineering occupies the entire basement with its offices, Dynamo Laboratories, High Tension Laboratory, Electrical Measurements Laboratory, Instrument Room, and research areas.



MAP SHOWING NORTHEASTERN UNIVERSITY AND VICINITY

*Key to Map**Northeastern University and Vicinity*

1. EAST BUILDING
2. SOUTH BUILDING
3. WEST BUILDING
4. SYMPHONY HALL
5. HORTICULTURAL HALL
6. CHRISTIAN SCIENCE CHURCH
7. NEW ENGLAND CONSERVATORY OF MUSIC
8. BOSTON OPERA HOUSE
9. BOSTON MUSEUM OF FINE ARTS
10. MECHANICS EXHIBITION HALL
11. BACK BAY STATION
12. TRINITY PLACE
13. BOSTON PUBLIC LIBRARY
14. TRINITY CHURCH
15. MUSEUM OF NATURAL HISTORY
16. BOSTON PUBLIC GARDEN
17. BOSTON COMMON
18. SOUTH STATION
19. NORTH STATION
20. STATE HOUSE
21. U. S. CUSTOMS HOUSE
22. ROWES WHARF

On the first floor are located the Departments of Civil and of Industrial Engineering. A Hydraulics and Sanitary Engineering Laboratory, a Methods Engineering Laboratory, a Civil Engineering drafting room, and several classrooms complete the layout of this floor. A large lecture room, several classrooms, the Chemical Engineering Unit Operations Laboratory, the Chemical Engineering Department Offices, and the Biology Laboratory are located on the second floor.

East Building

The East Building of Northeastern University is the educational wing of the Huntington Avenue Branch of the Boston Y.M.C.A. On its second floor are located the library, a branch library and reading room, and several classrooms. The third floor contains the office of the Dean of Business Administration, several departmental offices, a laboratory for statistical work, and additional classrooms. On the fourth floor are located the office of the Dean of Liberal Arts, the Department of English, the Department of Modern Languages, several large lecture rooms, and a Student Union Reading Room.

Jacob P. Bates Hall, located in the East Building, has a seating capacity of 400. The hall is equipped with a motion picture machine and has a large stage suitable for entertainments of various kinds.

Bates Hall is an important center for various student activities. Here the band and the orchestra have their rehearsals, the glee club gives its entertainments, and some of the dramatic work is presented. Numerous student socials and small group dinners frequently are held here.

Natatorium

The swimming pool, 75 feet long by 25 feet wide, is supplied with filtered water and is heated to the proper temperature by an elaborate system of pipes. It is one of the finest of its kind in New England.

Gymnasium

This structure, the funds for which were provided by the relatives of the late Samuel Johnson, is known as the Samuel Johnson Memorial Gymnasium. The gymnasium provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, and electric cabinet baths.

Lecture Assembly Halls

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

Equipment for Physical Training

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining the West Building is a large field equipped for athletics. Here are two tennis courts, an outdoor gymnasium, a rifle range, a baseball cage, jumping pits, and a track with a 100-yard straightaway.

Huntington Field

Northeastern University owns and operates a large athletic field a short distance from the University. This field, known as the Huntington Field, provides ample facilities for track, baseball, football, and other outdoor sports. A bus service maintained between the field and the University makes it possible for students to get back and forth with a minimum loss of time. A new and commodious field house has recently been erected at the field as well as ten sections of stadium seats capable of seating 2,000 spectators.

Design and Drafting Rooms

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

Libraries

The library service of Northeastern University comprises the following units:

1. The Main Library, located on the second floor of the East Building, includes three reading rooms in which are available all of the general reference books, many of the professional and scientific volumes, and all of the periodicals (approximately 100) to which the University subscribes. This library is under the direction of a librarian and two assistants, all of whom have had special training for the work. Main library hours are as follows:

9:00 A.M. to 10:00 P.M. Daily
2:00 P.M. to 9:00 P.M. Sundays
12:00 M to 9:00 P.M. Holidays

2. The Branch Library, also located on the second floor of the East Building, houses most of the books on engineering and management with the exception of those in the field of chemical engineering, which, for greater convenience of students in this department, are kept in the Main Library. The Branch Library is in charge of a corps of student assistants and is open from 8:45 A.M. to 5:15 P.M. daily except Sundays. Students have access directly to the shelves which contain books on reserve for particular courses as well as general reference works.

3. A general reading room and library is maintained by the Northeastern Student Union in Room 356, West Building. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc., among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

Boston Public Library

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

Student Activities

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth-while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with *excessive* devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact, some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities, for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

Athletic Association

All students in the Day Division are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities appointed by the vice-president in charge of the Day Division. This committee decides what students are eligible to

participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as ex officio members.

The University maintains both varsity and freshman teams in basketball, baseball, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.

Tennis Club

The Northeastern University Tennis Club is open to all undergraduates. The Department of Student Activities appoints a faculty adviser who assists the members in conducting an intramural tennis tournament. Excellent facilities for tennis are afforded on the courts adjacent to the East Building of the University. In the early spring members of the Tennis Club have access to the gymnasium for indoor practice.

Mass Meeting

The hour from 12:00 to 1:00 on Wednesdays throughout the year is set aside for mass meetings. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers for the year will be found on page 13 of this catalogue. When the mass meeting hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

"The News"

A college newspaper, the *Northeastern News*, is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the *News* staff and promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The *Northeastern News* is a member

of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the *News* are mailed to upperclassmen when they are at co-operative work and to freshmen after the close of their college year.

"The Cauldron"

The senior class publishes annually a college year book, *The Cauldron*. It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

The Handbook

Each fall the Northeastern Student Union issues a conveniently sized student *Handbook*, which is sold to students at a nominal price. The book contains information about the various college clubs, athletic programs, fraternities, rules governing freshmen, lockers, publications, and so on. The *Handbook* also includes a diary for the college year in which it is issued.

Student Council

Student government of the Day Division at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject to faculty approval, over all such matters as customs, privileges, campus regulations, etc. and meets regularly to consider and act upon issues referred to it for decision. The Dean of Students serves as faculty adviser to the Student Council.

Honor Societies

Three honorary societies are chartered by the University in its Day Division:

The Senate, in the College of Engineering.

The Sigma Society, in the College of Business Administration.

The Academy, in the College of Liberal Arts.

Election to the college honorary fraternity is founded primarily upon scholarship, but before a man is privileged to wear the honorary society insignia he must give evidence of an integrity of character and an interest in the extra-curricula life of the Uni-

versity as well as an acceptable personality. The Societies have memberships consisting of the outstanding men in the Day Division. Election to the honorary society is the highest honor that can be conferred upon an undergraduate.

Fraternities

There are at present ten local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- | | |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma | 6. Phi Beta Alpha |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi |
| 3. Eta Tau Nu | 8. Sigma Phi Alpha |
| 4. Nu Epsilon Zeta | 9. Kappa Zeta Phi |
| 5. Sigma Kappa Psi | 10. Gamma Phi Kappa |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

Professional Societies and Clubs

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored.

Accounting — Law Club

All students interested in accounting and law are invited to join this stimulating club. Problems and cases involving the interrelations of accounting and law are presented and discussed at club meetings. Although upperclassmen usually present problems arising out of thesis or co-operative work, speakers from the professional world come to the meetings to present papers and lead the student discussion.

Banking Club

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the College of Business Administration, is eligible to active membership in this club. Meetings are held each ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field of banking.

National Engineering Societies

Students in the several professional curricula of the College of Engineering operate Northeastern University Sections of the appropriate national engineering societies. Chief among these are the following:

American Society of Mechanical Engineers
Boston Society of Civil Engineers
American Institute of Chemical Engineers
American Society for the Advancement of Management
American Institute of Electrical Engineers

Members of the engineering faculty who hold membership in the parent organizations serve as advisers to these student groups. Meetings are held regularly, usually at night so that students from both Divisions may attend, and practicing engineers are invited to address the Section. Occasionally appropriate motion pictures are shown, or the group visits some current engineering project in the vicinity of Boston. The College of Engineering encourages these student sections of the technical societies in the belief that they provide a wholesome medium for social intercourse as well as a worth-while introduction to professional life.

Affiliated Engineering Societies of New England

Membership in the student sections of the Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Affiliated Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides very valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

International Relations Club

The International Relations Club was founded in 1932 for the purpose of studying and discussing those current national and international events and issues which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upper-classmen who maintain good scholarship.

Astronomy Club

Membership in the Astronomy Club is open to all students in the College of Engineering who maintain satisfactory scholastic standing. The club has access to machine shops for the construction of telescopes and other instruments. It also has quarters in the penthouse on the fifth floor of the West Building. Meetings are held twice a month for the purpose of making astronomical observations and carrying on appropriate discussions.

Debating Society

The purpose of the Debating Society, formed in 1936, is "to foster and promote an interest and facility in formal argumentation; to develop an impartial, unbiased, and intellectual consideration of questions and issues of current interest; and to sponsor intercollegiate relationships and competition in the debating field." Membership is open to all students of the Day Division.

Radio Club

One of the most popular undergraduate activities is the Northeastern University Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Radio Laboratory in the penthouse of the West Building. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings, when students in both divisions may attend.

Dramatic Club

Students interested in dramatics have an opportunity to cultivate this art under faculty coaches who co-operate with the Dramatic Club in the production of several pieces in the course of each college year. Frequently the Northeastern Dramatic and Glee Clubs collaborate with those of Simmons College in light operas such as those of Gilbert and Sullivan.

Rifle Club

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting. Those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

Musical Clubs

The Department of Student Activities sponsors the following musical clubs: an orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Division. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Camera Club

The Camera Club welcomes all men interested in photography. Weekly discussions and special evening lectures by guest artists are part of the yearly program. Field trips, monthly photo contests and a general exhibition add to the interest and progressive work of this organization.

Mathematics Society

The Mathematics Society encourages the study of topics of mathematical interest which are either outside or beyond the scope of the regular mathematics courses. Membership is restricted to those men who have completed one and one-half years of study in mathematics and have an average grade of not less than "C" in mathematics courses up through differential calculus. The club meets once every five weeks in the evening. Although membership is limited to upperclassmen, any student is always welcome to any meeting, and freshmen especially interested in mathematics are always welcome.

The final program of the year is devoted to a dinner meeting for which some prominent outside speaker is procured.

Class Organization and Activity

Each of the Classes in the Day Division elects its officers and carries on activities as a class. Dances are sponsored by the classes at regular periods throughout the year. One of the high lights of the social program is the Junior Promenade, held each spring at one of the Boston hotels.

Seniors plan a whole week of activities just prior to Commencement in June.

Freshmen are required to wear the red and black cap distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

The Northeastern Student Union

The purpose of the Northeastern Student Union is to carry out the work of a Christian association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra-curricula work.

The Union conducts a weekly Chapel Service in the little chapel in the West Building, to which all faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8:40 to 8:55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

Awards and Prizes

Public Speaking Contest

Each spring the University conducts a Public Speaking Contest for which all students in the Day Division are eligible. Prizes of fifty, twenty-five, fifteen, and ten dollars respectively are awarded to the four ablest speakers at a general mass meeting of the student body.

Speeches are original in nature and about ten minutes in length. The judges base their decision on appropriateness of subject, content, and delivery. Preliminary contests are held during the winter in each division.

Alcott Award

In 1934 the William Jefferson Alcott, Jr. Memorial Fund was established by the faculty and other friends to perpetuate the memory of Professor Alcott who was a member of the Department of Mathematics in Northeastern University from 1924 until his death in 1933.

Each year the income from this fund is used for a suitable award to the Northeastern University Day Division student who has made some outstanding academic achievement during the preceding year. The recipient of the award is chosen by a committee elected by the faculty.

Alumni Association

The alumni of the Day Division are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

Among the events sponsored by the Alumni Association are the annual meeting and reunion; the annual alumni-varsity basketball game; and class reunions. The Association also awards a track trophy each year and contributes to the Alumni Student Loan Fund.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

*Officers of the Alumni Association**President*

LINDSAY ELLMS '23

Vice President

GEORGE A. MALLION '20

Secretary

EARL H. THOMSON '25

Treasurer

WILLIS P. BURBANK '31

Executive Committee

FARNHAM W. SMITH '24

RAYMON D. TELLIER '28

JOHN W. GREENLEAF, JR. '30

GEORGE DAVENPORT '28

JAMES W. DANIELS '25

Alumni Executive Secretary

RUDOLF O. OBERG '26

Alumni Council Representatives

1913-1920 JOHN R. McLEISH

1929—HAROLD L. BURTON

HARRY J. FREEMAN

1930—DEXTER W. LOVELL

PERRY F. ZWISLER

ALEXANDER G. MACGREGOR

1921—ROGER E. SPEAR

1931—DONALD H. MACKENZIE

1922—RICHARD B. BROWN

1932—SIDNEY A. STANDING

1923—THOMAS A. STEVENS

1934—J. LLOYD HAYDEN

1924—FARNHAM W. SMITH

1935—HARTWELL G. HOWE

1925—RENE G. MAURETTE

1936—FREDERIC S. BACON, JR.

1926—EARL L. MOULTON

1937—JOHN F. SHEA

1927—RUDOLPH A. LOFGREN

1938—CHESLEY F. GARLAND

1928—WILLIAM E. R. SULLIVAN

Admission Requirements

A PPLICANTS for admission to the freshman class without restrictions must qualify by *one* of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.

2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.

3. Examinations.

(Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

Prescribed Subjects for Admission

Mathematics	3 units
*Physics or Chemistry	1 unit
History, Social Studies and/or Foreign Language	2 units
English	3 units
**Electives	6 units
<hr/>	
Total	15 units

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Committee on Admission reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

Other Requirements

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along with the formal requirements stated above, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for

*Physics is recommended.

**Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and, most important of all, his character,—all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

Personal Interview

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Application for Admission

Each applicant for admission is required to fill out an application blank whereon he states his previous education as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5) is required when the application is filed. This fee is non-returnable.

The last page of this catalog is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to Director of Admissions, Northeastern University, Boston, Mass. Checks should be made out to Northeastern University.

Candidates are urged to visit the office of Admissions for personal interview if it is possible for them to do so before submitting their applications. Office hours of the Department are from 9:00 A.M. to 4:00 P.M. daily; Saturdays to 12:00 M. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Applications should be filed not later than May 1, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

Registration

Eligibility for admission does not constitute registration. Freshmen register at the University on September 5, 1940. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have had inadequate preparation in any of his prerequisite subjects, the Faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry. Students admitted to advanced standing are not eligible for placement at co-operative work until they have completed a full year of academic work at the University.

Entrance Condition Examinations in Boston

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the University unless special arrangements are made with the Department of Admissions to administer them elsewhere.

Students are advised to take such examinations on the earliest possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10:00 A.M. to 12:00 M.
1:00 P.M. to 3:00 P.M.

During the current year examinations will be given on the following days: June 5, 1940; August 28, 1940. All other examinations will be given by special assignment.

Freshman Orientation Period

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated before the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp is planned particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag, in the northern part of Massachusetts, is admirably equipped for this purpose, having ample facilities for baseball, basketball, tennis, boating and swimming. The cost of the two days at camp is nominal, and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

Physical Examination

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2).

Freshman Counselors

At the time of his matriculation each freshman is assigned to a personal counselor, a member of the faculty, who serves as an interested and friendly counselor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in counseling work. The aim of the freshman counseling system is primarily to assist students in making an effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Counseling is under the direction of a Dean of Students, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of problem cases.

Individual Attention to Freshmen

Not only is attention given to the problems of the student in connection with his studies, but also the service is extended to include help upon any problem in which advice is needed and desired, the aim being to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, in view of his previous school record, his score on the psychological test, and the other factors in his situation. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue to do so. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.

First Year Common to All Curricula

All engineering students carry the same courses of study throughout the freshman year, during which they are given an opportunity to survey the various fields of engineering. Choice of curriculum can then be made more intelligently at the beginning of the sophomore year. Students who are unsuccessful in the basic courses of the freshman year will not be permitted to continue with an engineering program but will be advised to change their goal and type of training.

Trustee Scholarships

Each year Northeastern University grants in the Day Division twenty-five (25) full tuition scholarships to entering freshmen who have demonstrated, throughout their preparatory or high school course, superior scholarship. For additional information relative to these scholarships, communicate with the Director of Admissions.

Henry B. Alvord Memorial Scholarship in Civil Engineering

This scholarship was established in memory of the late Henry B. Alvord, Professor of Civil Engineering and Chairman of the Department for eighteen years. The award is made annually to a young man graduating from an accredited secondary school who has demonstrated superior academic ability and is likely to succeed in Civil Engineering. The grant of \$250 is made only to an entering freshman who is qualified for and plans to study Civil Engineering.

Requirements for Graduation

THE College of Engineering offers five-year curricula, conducted on the co-operative plan, leading to the following degrees:

- I Bachelor of Science in Civil Engineering
- II *Bachelor of Science in Mechanical Engineering
- III Bachelor of Science in Electrical Engineering
- IV Bachelor of Science in Chemical Engineering
- V Bachelor of Science in Industrial Engineering

Candidates for the Bachelor of Science degree in the College of Engineering must complete all of the prescribed work of the curriculum in which they seek to qualify, together with ten additional semester hours of credit in elective subjects of a liberal nature. This makes a minimum of 147 semester hours required for the degree. A minimum of 125 weeks of college attendance is needed to fulfill this requirement. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the S.B. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

Scholarship Requirements

Any student who fails to show a satisfactory standard of general efficiency in his professional field may be required to demonstrate his qualifications for the degree by taking such additional work as the faculty may prescribe. If he is clearly unable to meet the accepted standard of attainment, he may be required to withdraw from the University.

Graduation With Honor

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor or with highest honor. Students must have been in attendance at the University at least two years before they may become eligible for graduation with honor, with high honor, or with highest honor.

Thesis Option

Theses are not required of candidates for the degree of Bachelor of Science in the several fields of engineering. Students who show special aptitude for thesis work, however, may be permitted to substitute an appropriate thesis for equivalent work in class. Such permission must be obtained by the candidate from the head of his professional department.

*Includes options in Aeronautical Engineering, Air Conditioning Engineering, and Diesel Engineering.

ENGINEERING CURRICULA AND COURSES OF INSTRUCTION

I *Civil Engineering*

Civil Engineering covers such a broad field that no one can become expert in its whole extent. It includes topographical engineering, municipal engineering, railroad engineering, structural engineering, and hydraulic and sanitary engineering. It covers land surveying, the building of railroads, harbors, docks, and similar structures; the construction of sewers, waterworks, roads and streets; the design and construction of girders, roofs, trusses, bridges, buildings, walls, foundations, and all fixed structures. All of these branches of engineering rest, however, upon a relatively compact body of principles, and in the theory and application of these principles the students are trained in the classroom, in the field, and in the testing laboratory. The curriculum is designed to prepare the young engineer to take up the work of design and construction of structures, to aid in the location and construction of railways and highways, and to undertake intelligently the supervision of work in allied fields of engineering and in general contracting.

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES

PRE-REQUISITE COURSES

M 5 Differential Calculus
ME 20 Applied Mechanics
EL 5 Electrical Machinery

Second Year

M 1 Algebra, M 4 Analytic Geom.
P 1 Physics I
P 2 Physics I

Third Year

ME 22 Strength of Materials
CI 7 Curves and Earthwork

ME 20 Applied Mechanics
CI 4 Higher Surveying

Fourth Year

CI 15 Theory of Structures
ME 23 Strength of Materials
CI 20 Advanced Surveying

ME 22 Strength of Materials
ME 22 Strength of Materials
CI 4 Higher Surveying

Fifth Year

CI 23 Engineering Structures
CI 25 Concrete
CI 29 Structural Design
CI 21 Sanitary Engineering

CI 16 Theory of Structures
ME 22 Strength of Materials
CI 16 Theory of Structures
CI 12 Hydraulics

I. Civil Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3	M 4	Analytic Geometry....	5
M 3	Trigonometry.....	2	PE 2	Hygiene.....	1
D 1	Graphics I.....	3	D 2	Graphics II.....	3
P 1	Physics I.....	3	P 2	Physics I.....	3
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	Inorganic Chemistry	4
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
Ps 1-A	Orientation.....	0			
		18			19
<i>Second Year</i>					
M 5	Differential Calculus...	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory....	1
CI 3	Surveying I.....	1½	CI 4	Surveying II.....	2½
CI 5	Surveying I, F & P....	1	CI 6	Surveying II, F & P....	1
EL 5	Electrical Machinery...	4	ME 20	Applied Mechanics....	3
		12½			12½
<i>Third Year</i>					
ME 21	Applied Mechanics....	3	ME 22	Strength of Materials...	3
ME 35	Heat Engineering.....	2	ME 36	Heat Engineering.....	2½
CI 7	Curves and Earthwork I	2	CI 8	Curves and Earthwork II	2
CI 9	Curves & Earth. I, F&P	1	CI 10	Curves & Earth. II, F&P	1
Ec 21	Economics.....	2	Ec 22	Economics.....	2
CI 11	Hydraulics.....	2½	CI 12	Hydraulics.....	2
		12½			12½
<i>Fourth Year</i>					
ME 23	Strength of Materials...	2	CI 20	Advanced Surveying...	2
ME 69	Testing Materials Lab..	1½	ME 70	Testing Materials Lab..	1½
CI 15	Theory Structures.....	3	CI 16	Theory Structures.....	3
CI 31	Highway Engineering...	2	CI 32	Highway Engineering...	2
S 1	Sociology.....	2	S 2	Sociology.....	2
Gy 1	Geology.....	2	Gy 2	Geology.....	2
		12½			12½
<i>Fifth Year</i>					
C 7	Engineering Conference	½	C 8	Engineering Conference	½
CI 23	Engineering Structures..	3	CI 24	Engineering Structures .	3
CI 25	Concrete.....	2	CI 26	Concrete.....	2
CI 27	Concrete Design.....	1	CI 28	Concrete Design.....	1
CI 29	Structural Design.....	2	CI 30	Structural Design.....	2
IN 5	Industrial Management I	2	IN 6	Industrial Management II	2
CI 21	Sanitary Engineering I..	2	CI 22	Sanitary Engineering II.	2
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF CIVIL ENGINEERING

PROFESSORS GRAMSTORFF, and BAIRD
MESSRS. DEVINE and SANDERSON

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

CI 3 *Surveying I*

The course is divided into two portions, the first of which treats of basic principles such as taping, theory of the transit and use of the transit, theory of the level, care of the level and use of the level.

The second portion deals with closed and random traverses, both the D.M.D. and the co-ordinate methods being used. Particular stress is laid upon having the student use the methods and procedures as outlined by the Massachusetts Land Court.

1½ semester hour credits

CI 4 *Surveying II*

The course consists of lectures and problem work in plane triangulation, double rodged levels, Coast and Geodetic leveling. The theory of the stadia and plane table is presented with their applications to topographic surveying. The theory of the sextant is also presented with its application to problems in hydrographic surveying.

2½ semester hour credits

CI 5 *Surveying I F. & P.*

The course is divided into two equal parts; the first part is devoted entirely to field work, while the second part is devoted entirely to office, or plotting work.

In the field an accurate tape and transit closed traverse is run. The angles are read by repetition. The distances are taped and each traverse point is carefully tied in. The aim is to obtain data for a closed traverse equal to or better than a Class A survey as set forth by the Massachusetts Land Court. Physical features are located from this traverse. The best methods and procedures of taking field notes are emphasized at all times.

In the drafting room the student is required to compute his closed traverse by both the D.M.D. and rectangular co-ordinate methods, to submit an original drawing showing the traverse and physical features, and to trace this drawing with careful attention to such details as lettering, appearance, and title.

1 semester hour credit

CI 6 *Surveying II F. & P.*

Like course number CI 5, this course is divided equally into two portions, one consisting of field work, the other of drafting room work.

The field work is triangulation, including base line and measurement of angles by repetition with precise transits or theodolite. A complete plane table map is drawn locating physical features and contours. Some of the more elementary plane table problems such as intersection, resection, and three point problems are taken up. Precise and Coast and Geodetic leveling are also considered.

The drafting room work consists of the preparation of a topographic map based on computations of the triangulation systems, together with a tracing of the same; also the solving of such problems as the eccentric and the three-point problem (analytic solution).

1 semester hour credit

CI 7 *Curves and Earthwork I*

The principles of reconnaissance, preliminary, and location surveys, as applied to highway and railroad surveying, are used as an introduction for this course. These are followed by the principles and application of simple, compound, reversed, and vertical curves. Throughout the course, both the railroad curve and the circular arc are used. Many of the more difficult or complex problems are solved by the use of rectangular co-ordinates giving a continuation of the co-ordinate method as taught in Surveying I.

2 semester hour credits

CI 8 *Curves and Earthwork II*

This course is a continuation of CI 7, Curves and Earthwork. The various field procedures and methods of computation for taking cross sections are studied. Both the average end area method of computing volumes and the prismoidal formulae are taught. The principles and methods used in balancing volumes and constructing and solving mass diagrams are presented.

The spiral or transition curve as applied to railroad and highway location is taken up. In the latter part of this course the fundamentals of railroad track problems are presented.

2 semester hour credits

CI 9 *Curves and Earthwork I F. & P.*

A reconnaissance line is studied, and from this a preliminary center line in the form of a random traverse is run. From this preliminary line all the physical features several hundred feet each side of the center line are located. A map is then prepared showing these data. From this map suitable curves are computed and the location of the center line thus determined is staked out in the field.

1 semester hour credit

CI 10 *Curves and Earthwork II F. & P.*

This is a continuation of course CI 9. A profile of the center line is run and from this a suitable sub-grade profile of this line is obtained. Further field work is undertaken to obtain a complete set of cross section notes for the whole line, and special emphasis on field notes is made throughout the course.

In the drafting room the volumes and balanced volumes are computed. From these a mass diagram is prepared and a complete earthwork solution is solved by use of the mass diagram and the profile.

1 semester hour credit

CI 11 *Hydraulics*

The course, which opens with the laws of hydrostatics, treats of gases, and the amount and points of application of the center of pressures on submerged surfaces. The laws of hydrokinetics, including those of the flow of liquids through orifices, short tubes, weirs, pipe lines, and open channels are studied with particular reference to Bernoulli's theorem. Many demonstrations are made in the hydraulics laboratory. Other topics taken up are dimensional analysis, Reynold's number, and Stoke's Law.

2½ semester hour credits

CI 12 *Hydraulics*

This is a continuation of CI 11 in which the principles of channel flow are taken up. The topics include Chezy's formula, critical depth, backwater, and hydraulic jump. The course concludes with a consideration of hydraulic turbines, reaction turbines, and pumps. Laboratory demonstrations are continued.

2 semester hour credits

CI 15 *Theory of Structures*

The course comprises lectures and recitation work in the study of the loads, reactions, shears, and moments acting upon statically determinate structures of various kinds such as roofs and bridges. A complete and thorough presentation of the usual methods of determining bar stresses in simple trusses is also undertaken.

All of the foregoing studies are covered in detail by both algebraic and graphic methods.

Following a discussion of roof truss types and loading, the above methods are applied to the complete analysis of a roof truss.

3 semester hour credits

CI 16 *Theory of Structures*

A complete study of the function of influence lines in determining the shears, moments, and stresses produced in various types of simple structures by moving load systems both distributed and concentrated. Methods of providing for impact stresses in structures are discussed and analyzed. The material given in CI 15 and also in this course is then summarized by the solution of problems determining the design stresses for several types of bridge structures.

3 semester hour credits

CI 20 *Advanced Surveying*

The course covers the theory underlying the use of the sextant and transit in solving astronomical surveying problems in azimuth and time. It also includes aerial surveying and map projection. Computations in geodetic triangulation are made including the conversion of geodetic to rectangular co-ordinates.

2 semester hour credits

CI 21 *Sanitary Engineering I*

The course is designed primarily to be a lecture course supplemented by problems involving the following items of water supply engineering; the collection and assimilation of rainfall data; the methods of collection and storage for ground water or surface waters; the preparation of a dam site and the elements of design as applied to masonry and earth filled dams; methods of distributing water for domestic use, manufacturing, and for fire fighting; treatment of water for hardness; treatments of water to provide a palatable and safe water supply free from contamination. Consideration is given also to present day activities in regard to the improvement of water supply apparatus with special emphasis upon costs of installation, cost of apparatus, and total cost as applied to water supply engineering.

2 semester hour credits

CI 22 *Sanitary Engineering II*

This is a companion course to CI 21, Sanitary Engineering I. It deals with the collection and disposal of sewage and storm water, including the following items: the quantity of sewage to be collected; the sewerage collection systems for either a separate or a combined system; the surveying and the collection of data in order to prepare plans for the design and the construction of the collection system; and a thorough discussion of the modern methods of treating the sewage and the operation of the sewerage disposal plants.

2 semester hour credits

CI 23 *Engineering Structures*

The work begins with the design of bridge trusses having secondary web systems (including Baltimore and Petit trusses) and trusses with multiple web systems, lateral and portal bracing, transverse bents, viaduct towers and cantilever bridges.

A study is made of slope and deflection with emphasis on the methods of "Moment Area" and "Elastic Weights." The graphical solution of deflections as illustrated by the Williot-Mohr diagram is studied.

3 semester hour credits

CI 24 *Engineering Structures*

The course consists of the study of rigid frames and continuous beams. All the customary methods are discussed, including the Three Moment Equation, Least Work, Slope Deflection, and Moment Distribution. The solution of statically indeterminate problems in continuous beams is obtained by algebraic and graphical methods.

3 semester hour credits

CI 25 *Concrete*

Concrete as a material of construction is studied in detail, and the principles of reinforced concrete design are learned. Computations and designs are made of rectangular beams, T beams, and girders.

2 semester hour credits

CI 26 *Concrete*

This course, a continuation of CI 25, covers the design of reinforced concrete columns, footings, retaining walls, and arches. It also includes a discussion of engineering foundations. The topics taken up are sub-surface explorations, pile foundations (both timber and concrete) sheet piles, cofferdams, open and pneumatic caissons, pier foundations in open wells, and bridge piers.

2 semester hour credits

CI 27 *Concrete Design*

This course consists of the detailing and making of complete working drawings of the elements of design studied in CI 25, as applied to the design of a reinforced concrete factory building.

1 semester hour credit

CI 28 Concrete Design

The design of the typical floor system of the building referred to in CI 27 is completed and drawn up together with similar drawings of typical columns and footings.

1 semester hour credit

CI 29 Structural Design

The course comprises a series of practical design problems covering elementary members and combinations thereof under various loading conditions, together with some detailing.

2 semester hour credits

CI 30 Structural Design

The application of the principles of CI 29 extended to the design of complete structures. These problems are selected so as to be comprehensive in scope, covering the design of sections, rivet spacing, splices, connections, end bearings, bracing, etc. Selected parts of the structure are detailed.

2 semester hour credits

CI 31 Highway Engineering

Beginning with a consideration of the various types of highways: residential, commercial, interurban, intersectional, express, etc., this course proceeds to a discussion of highway finance and administration, traffic surveys, highway operation and traffic control, design of highway systems, and the economic justification of highway improvement and extension. Problems of gasoline tax diversion and other taxation evils bearing upon highway development are included in the discussion.

2 semester hour credits

CI32 Highway Engineering

In this course are taken up the location, construction, and maintenance of roads, street design, and drainage; sidewalks; pavement foundations; and the construction, cost and maintenance of the various kinds of roads and pavements, including asphalt, brick, stone-block, wood-block, macadam (both water bound and bituminous), bituminous concrete, Portland Cement concrete, gravel and earth. Special consideration is given to the modern concrete road.

2 semester hour credits

II Mechanical Engineering

The program of instruction is designed to give the student a broad foundation in those fundamental subjects which form the basis for all professional engineering practice, and especially to equip the young engineer with a knowledge of the various phases of mechanical engineering. The curriculum embraces instruction by textbook, lecture, laboratory, and designing room practice, and is planned definitely to develop the student's initiative and instill accuracy. Practically all courses are prescribed for the first four years, but in the senior year, students may specialize to a limited degree in aeronautical engineering, air conditioning engineering, or Diesel engineering. All programs lead to the degree of Bachelor of Science in Mechanical Engineering.

The following table sets forth the pre-requisite courses of the mechanical engineering curriculum, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
	<i>Second Year</i>
M 5 Differential Calculus	M 1 Algebra, M 4 Analytic Geometry
ME 20 Applied Mechanics	P 1 Physics I
EL 5 Electrical Machinery	P 2 Physics I
	<i>Third Year</i>
ME 22 Strength of Materials	ME 20 Applied Mechanics
	<i>Fourth Year</i>
ME 23 Strength of Materials	ME 22 Strength of Materials
ME 24 Advanced Mechanics	ME 23 Strength of Materials
ME 31 Heat Engineering	ME 30 Heat Engineering
	<i>Fifth Year</i>
ME 51 Machine Design	ME 23 Strength of Materials
ME 15 Industrial Plants	ME 23 Strength of Materials
ME 44 Power Plant Engineering	ME 32 Heat Engineering
ME 73 Aircraft Structures	ME 29 Heat Engineering
ME 37 Diesel Engines	ME 40 Aerodynamics
ME 45 Air Conditioning Des. I	ME 31 Heat Engineering
	ME 42 Heating and Air Conditioning

II. Mechanical Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3	M 4	Analytic Geometry....	5
M 3	Trigonometry.....	2	PE 2	Hygiene.....	1
D 1	Graphics I.....	3	D 2	Graphics II.....	3
P 1	Physics I.....	3	P 2	Physics I.....	3
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	Inorganic Chemistry	4
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
Ps 1-A	Orientation.....	0			
		18			19
<i>Second Year</i>					
M 5	Differential Calculus...	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory....	1
IN 3	Production Processes I...	2½	IN 4	Production Processes II.	1½
EL 5	Electrical Machinery...	4	ME 20	Applied Mechanics....	3
			D 4	Machine Drawing.....	2
		12½			12½
<i>Third Year</i>					
ME 21	Applied Mechanics....	3	ME 22	Strength of Materials...	3
ME 1	Mechanism.....	3	EL 6	Electrical Measurements	2½
ME 29	Heat Engineering.....	2	ME 30	Heat Engineering.....	3
Ec 21	Economics.....	2	Ec 22	Economics.....	2
CI 11	Hydraulics.....	2½	CI 12	Hydraulics.....	2
		12½			12½
<i>Fourth Year</i>					
ME 23	Strength of Materials...	2	ME 24	Advanced Mechanics..	2
IN 5	Industrial Management I	2	IN 6	Industrial Management II	2
ME 31	Heat Engineering.....	2½	ME 32	Heat Engineering.....	2½
ME 61	Mechanical Eng. Lab...	2	ME 62	Mechanical Eng. Lab...	2
S 1	Sociology.....	2	S 2	Sociology.....	2
ME 27	Metallography.....	2	{ ME 42 Heating and Air Cond.		
			{ or ME 40 Aerodynamics..	2	
		12½			12½
<i>Fifth Year</i>					
C 7	Engineering Conference	½	C 8	Engineering Conference	½
ME 51	Machine Design.....	3	ME 52	Machine Design.....	3
ME 63	Mechanical Eng. Lab...	2½	ME 44	Power Plant Eng.....	2½
IN 21	Contracts.....	2	IN 16	Personnel.....	2
	Professional Electives...	4½		Professional Electives...	4½
		12½			12½
<i>Electives:</i>			<i>Electives:</i>		
ME 33	Refrigeration.....	2	ME 48	Air Conditioning Lab.	2
ME 45	Air Cond. Design I....	2½	ME 46	Air Cond. Design II....	2½
ME 37	Diesel Engines.....	2	ME 38	Diesel Laboratory.....	2
ME 39	Engine Dynamics.....	2½	ME 54	Diesel Engine Design...	2½
ME 73	Aircraft Structures.....	2	ME 74	Aeronautical Lab.....	2
ME 15	Industrial Plants.....	2½	ME 16	Industrial Plants.....	2½
			ME 76	Aircraft Engine Design.	2½
			ME 34	Steam Turbines.....	2

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S. B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF MECHANICAL ENGINEERING

PROFESSORS ZELLER, FERRETTI, STEARNS, BAILEY and WHITTAKER;
MESSRS. COLE and WOLOWICZ

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

ME 1 Mechanism

This course deals mainly with a mathematical solution of problems involving angular and linear velocities and gear trains. It embraces a careful study of paths of mechanical movements and their application to velocity diagrams, quick-return mechanisms, and cams. The theory of gear tooth outlines is also investigated by graphical methods.

3 semester hour credits

ME 15 Industrial Plants

The principles involved in the erection, installation, and management of an industrial plant are studied in this course. Various types of structures are described, with attention to such details as foundations, walls, columns, floors, windows, and so forth; and the calculations and layout for a typical mill are discussed. This material is followed by a problem on the calculation and layout of a machine shop, including power requirements and placement of machines, with special consideration to the best conditions for maximum production and the most effective routing of a given product.

3 semester hour credits

ME 16 Industrial Plants

This course, a continuation of ME 15, includes a problem on the heating and air-conditioning of a building, and a design problem on the calculation and layout of a power plant. Sizes of equipment, costs of power generation, and various operating practices are discussed and worked out. The later problems of the course have to do with the layout of the power plant previously figured.

3 semester hour credits

ME 20 *Applied Mechanics (Statics)*

The subjects treated are collinear, parallel, concurrent, and non-concurrent force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the string polygon method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

3 semester hour credits

ME 21 *Applied Mechanics (Kinetics)*

The subjects treated are continuation of first moments as applied to varying intensity of force and to the determination of center of gravities of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia; product of inertia principal axes, uniform motion, uniformly accelerated motion, variable accelerated motion, harmonic motion, simple pendulum, rotation, plane motion, work, energy, momentum and impact.

3 semester hour credits

ME 22 *Strength of Materials*

The topics covered in this course are physical properties of materials, stresses in thin hollow cylinders and spheres, riveted connections of the structural and continuous plate type, welded connections, and beams, covering shearing force and bending moment with stress analysis due to these effects and the design of beams for both conditions.

3 semester hour credits

ME 23 *Strength of Materials*

This is a continuation of ME 22 covering deflection of beams by the double integration method; stresses and strains in shafting due to torsion, angle of twist; horsepower; combined axial and bending loads, eccentric loads; compression members or columns by Euler's column formula, and by those of the Gordon-Rankine parabolic and straight line type.

2 semester hour credits

ME 24 *Advanced Mechanics*

Advanced problems in the strength of materials and dynamics are treated. Among the subjects under discussion are non-symmetrical bending, curved bars, flat plates, thick hollow cylinders, dynamical stresses in machine parts, and allied subjects leading to the more advanced applications of mechanics in machine design, the elastic theory, and photoelasticity.

2 semester hour credits

ME 27 Metallography

The course in metallography is intended to show the student the relation between the crystalline structure of metals and their physical properties.

The theory of crystallization and the equilibrium diagram are studied. Specimens of metal of known composition are studied by use of the metallographic microscope and their physical properties compared. The effect of heat treatment on the crystalline structure is noted.

2 semester hour credits

ME 29 Heat Engineering

The course is largely a description of the many appliances used in modern power plants. There is also taken up a discussion of boilers and boiler accessories, ash and coal handling systems, the various types of engines with their valve gears and governing devices, condensers, feed-water heaters, pumps, etc.

2 semester hour credits

ME 30 Heat Engineering

In this introductory course in the fundamentals of thermodynamics the following subjects are discussed: general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including development and use of tables and charts; thermodynamic processes of gases, and saturated and superheated vapors; and the general equations for the flow of fluids.

3 semester hour credits

ME 31 Heat Engineering

The principles of thermodynamics are applied, in this course, to various engineering problems. The fundamental laws governing flow of gases and vapors through nozzles and orifices; the theory of vapor engines, including a discussion of the Rankine, the reheating, the regenerative and the binary vapor cycles; the efficiencies and power calculations for actual steam engines; and the efficiencies and power requirements of single and multi-staged air compressors are the major subjects treated.

The various types of modern internal combustion engines are taken up in detail, including the latest designs of automobile, airplane, and Diesel engines.

Considerable stress is placed on the Diesel engine; and the advantages of the high speed, medium speed, and low speed types, two cycle and four cycle designs, solid and air injection Diesels in their respective fields are discussed.

2½ semester hour credits

ME 32 Heat Engineering

This course is a continuation of the applications of the principles of thermodynamics to engineering problems. The subjects discussed are hot air and internal combustion engines; fuels and combustion, including a complete heat balance of a boiler plant; gas and vapor mixtures; and the principles of heat transfer as applied to steady flow conditions.

2½ semester hour credits

ME 33 Refrigeration

A discussion is given of the history, theory, equipment, and applications of refrigeration. The properties and hazards of the various refrigerants; the simple and compound compression cycle; the absorption system; the jet or vapor system; devices for improving theoretical and operating performance of machines are among the topics considered.

2 semester hour credits

ME 34 Steam Turbines

A study is first made of the flow of steam through nozzles, dynamic action of jets on moving blades, and other elements in the design of a steam turbine. This material is followed by a consideration of the various types of turbines, their governing mechanisms, condensing equipment, and other constructional details.

2 semester hour credits

ME 35 Heat Engineering

This is a short course covering the elements of thermodynamics and affording a general discussion of modern power plant equipment. Many typical calculations are made in regard to apparatus.

2 semester hour credits

ME 36 Heat Engineering

A continuation of ME 35, together with experimental work in the laboratory. Topics taken up in class include steam engine economy, multi-valve and multi-expansion engines, steam turbines, steam condensing equipment, pumps, and internal combustion engines.

In the laboratory experiments are performed on air blowers, steam engines, water wheels, pumps, and internal combustion engines.

2½ semester hour credits

ME 37 Diesel Engines

Analysis of the internal engine cycles based on the air cycle as well as the analysis with variable specific heats. The different types of Diesel engines are discussed and the methods of fuel injection are studied for each type.

2 semester hour credits

ME 38 Diesel Laboratory

This course includes a series of experiments on various apparatus used in modern power plants using Diesel power to illustrate under actual conditions the principles developed in ME 30 on thermodynamics. The students here apply in actual tests the knowledge they have acquired in the classroom, and make complete reports of these experiments including methods of testing and calculations.

2 semester hour credits

ME 39 Engine Dynamics

A consideration of the vibrations, balancing, critical speeds, and inertia effects of high speed internal combustion engines.

2 semester hour credits

ME 40 Aerodynamics

The course comprises a study of the fundamental theory of aerodynamics which underlies all calculations concerning the performance and stability of airplanes including characteristics of airfoils and elementary propeller theory.

2 semester hour credits

ME 42 Heating and Air Conditioning

The most important methods of heating and air conditioning various types of buildings are studied in this course. The principles of heat transfer and air flow are reviewed, and the application of them in the various systems is brought out through lectures and problems.

2 semester hour credits

ME 44 Power Plant Engineering

This course consists of topics and problems chosen largely from engineering practice selected to convey to the engineering students a firm grasp of fundamental principles and engineering methods of attacking and analyzing problems in power plant, not only from the point of view of scientific theory, but also with due consideration of the limitations imposed by practice and by costs. Efficiency and operating costs of different types of plants such as steam, hydro-electric, and Diesel engines are also carefully studied to determine the type of plant best suited for the conditions and location involved.

2½ semester hour credits

ME 45 *Air Conditioning Design I*

A particular building will be taken as a class problem for heating and air conditioning. Various systems will be discussed with their application to the building in question. A layout of piping and duct system will be made together with complete calculations and estimation of cost. An investigation and study of existing plants around the city will be made with trips to these plants whenever possible in order to bring out the practical problems involved in the design.

2½ semester hour credits

ME 46 *Air Conditioning Design II*

This course is a continuation of ME 45, and will be an application of the principles brought out and discussed in ME 42 on heating and air conditioning.

2½ semester hour credits

ME 48 *Air Conditioning Laboratory*

This course consists of a series of tests on various types of air conditioning and heating apparatus. Among the pieces of apparatus tested are the following: air blower; unit heater; Carrier air conditioner provided for humidification or dehumidification; hot air furnace equipped with oil burner, humidifier, blower, and air filters; and also automatic controls and a special insulated constant temperature room for the study of problems in heating and air conditioning.

2 semester hour credits

ME 51 *Machine Design*

Further practice is given the student in the application of theoretical principles previously studied, and at the same time he becomes familiar with the many practical details which must be considered in design work. The problems taken up in the early part of the course are of a static nature, while the later problems involve dynamical stresses. The problems vary from year to year, but the following are typical of the designs taken up: hydraulic press, arbor press, hydraulic flanging clamp, crane, air compressor, punch and shear, stone-crusher, and so forth.

In each design, the construction details are carefully considered, with special attention to methods of manufacture, provision for wear, lubrication, and so forth. The work is based on rational rather than empirical methods, the student being required to make all calculations for determining the sizes of the various parts and all necessary working drawings.

3 semester hour credits

ME 52 *Machine Design*

This course comprises a continuation of Machine Design ME 51 with special reference to designs involving dynamical stresses. A thorough discussion of the principles and methods of lubrication forms a part of the course.

3 semester hour credits

ME 54 *Diesel Engine Design*

This course consists of a layout problem in which an engine is designed to develop a definite horse power and in which the stresses in the various parts of the engine are analyzed.

2½ semester hour credits

ME 61 *Mechanical Engineering Laboratory*

This course comprises a preliminary series of experiments upon various apparatus used in modern power plants, to illustrate under actual conditions the principles developed in Heat Engineering ME 30. These exercises are a preparation for more complete tests to be run during the following semester.

The knowledge they have gained in the classroom, the students here apply in actual tests, and make a complete report of these experiments, including methods of testing and calculations. The following experiments are illustrative of the type of work taken up; calibration of gages, indicator practice, plain slide valve setting, test on steam calorimeters, flow of steam through orifices, steam injector test, weir calibration, and tests on friction of drives.

2 semester hour credits

ME 62 *Mechanical Engineering Laboratory*

This course consists of a series of tests on various types of power plant equipment, more complete than those made in ME 61. Among the pieces of apparatus tested are the following: steam engine, gasoline engine, air compressor, triplex power pump, steam pulsometer, rotary power pump, Pelton water wheel, centrifugal pumps, Ford gasoline engine, Warren steam pump, and steam turbine. Experiments are also made in flow of water measurements and flow of air.

A complete report is made on each test, describing the machine tested, explaining how the test is made, and giving the results, in accordance with the A.S.M.E. Power Test Codes.

2 semester hour credits

ME 63 *Mechanical Engineering Laboratory*

This is a continuation of course ME 62, to which it is generally similar. Some further experiments are made in the testing of materials, such as compressive, tensile, torsion, impact, and bending

tests. A boiler test of from ten to twenty-four hours' duration is made to determine the performance and efficiency of the boilers in the power plant; and oils and coals are tested in the laboratory to determine their characteristics and calorific values.

2½ semester hour credits

ME 69 *Testing Materials Laboratory*

A detailed study is made of the methods of manufacturing, properties, and uses of materials used in engineering work, such as iron, steel, lime, cement, concrete, brick, wood, and stone. Methods of testing and strength of various materials used by the engineer are also taken up. Each student is required to prepare a paper on some subject of especial importance which is assigned by the instructor.

The work of this course is carried out by the students, working in small groups. It includes tests to determine the elongation, reduction of areas, modulus of elasticity, yield point, and ultimate compressive strength of metals such as steel, cast iron, copper, and brass; compressive tests on timber and concrete; and tests to determine the deflection, modulus of elasticity, elastic limit, and ultimate transverse strength of steel and wooden beams subject to transverse load. Torsion and impact tests are carried out and their results correlated with those of the tensile tests.

The effect of various mixes and curing conditions on the tensile and transverse strength of cement and mortar are studied. Special problems are assigned in the failure of metals by fatigue.

1½ semester hour credits

ME 70 *Testing Materials Laboratory*

A continuation of course ME 69.

1½ semester hour credits

ME 73 *Aircraft Structures*

The fundamental analysis of the forces, reactions, shears, and moments as applied to aircraft structures is the object of this course.

2 semester hour credits

ME 74 *Aeronautical Laboratory*

Experimental work in connection with airplane engines, aeronautical equipment, and wind tunnel performance.

2 semester hour credits

ME 76 *Aircraft Engine Design*

This course covers the design of an airplane engine involving the thermodynamic principles as well as the stresses in the crankshaft, connecting rods, cylinders, springs, and other parts of the engine.

2½ semester hour credits

III *Electrical Engineering*

Probably none of the branches of scientific knowledge has been so markedly modified during the past decade as that relating to Electrical Engineering, nor has any other exerted such a profound influence upon the scientific thought of the period. "A science, like a plant, grows in the main by a process of infinitesimal accretion. Its theory is built like a cathedral through the addition by many builders of many different elements, and this is pre-eminently true of electrical theory." It is absolutely essential that the electrical engineer who hopes to make a success of his work should be able to grasp readily and absorb effectively the meaning and content of the many scientific memoirs recording the results of research bearing upon and directly influencing his chosen branch of engineering.

He must have a thorough appreciation of physical theory, a clear understanding of chemical principles, and a broad working knowledge of mathematics. It is essential that each student planning to take this curriculum should realize the fundamental necessity of obtaining a solid grounding in these three subjects upon which the success of his future work will definitely hinge.

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES		PRE-REQUISITE COURSES	
Second Year			
M 5	Differential Calculus	M 1	Algebra, M 4 Analytic Geometry
ME 20	Applied Mechanics	P 1	Physics I
EL 1	Electrical Eng. I	P 2	Physics I
Third Year			
ME 22	Strength of Materials	ME 20	Applied Mechanics
EL 9	Electrical Engineering II	EL 2	Electrical Engineering I
M 7	Differential Equations	M 6	Integral Calculus
Fourth Year			
EL 17	Electrical Engineering III	M 6	Integral Calculus
ME 23	Strength of Materials	ME 22	Strength of Materials
EL 21	Electrophysics	M 7	Differential Calculus
Fifth Year			
EL 25	Electrical Engineering IV	EL 18	Electrical Engineering III
EL 29	Electrical Engineering V-A	EL 22	Electrophysics

III. Electrical Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3	M 4	Analytic Geometry....	5
M 3	Trigonometry.....	2	PE 2	Hygiene.....	1
D 1	Graphics I.....	3	D 2	Graphics II.....	3
P 1	Physics I.....	3	P 2	Physics I.....	3
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	Inorganic Chemistry	4
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
Ps 1-A	Orientation.....	0			
		18			19
<i>Second Year</i>					
M 5	Differential Calculus...	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 7	Physics Laboratory.....	2	P 8	Physics Laboratory....	2
D 3	Engineering Drawing...	2	ME 20	Applied Mechanics....	3
IN 3	Production Processes I..	2½	IN 4	Production Processes II.	1½
EL 1	Electrical Engineering I.	1	EL 2	Electrical Eng. I.....	1
		12½			12½
<i>Third Year</i>					
ME 21	Applied Mechanics....	3	ME 22	Strength of Materials...	3
EL 9	Electrical Eng. II.....	1½	EL 10	Electrical Eng. II.....	2
EL 11	Electrical Eng. Lab.....	1	EL 12	Electrical Eng. Lab....	1
EL 13	Elec. Measurements I..	2½	EL 14	Elec. Measurements II..	2
Ec 21	Economics.....	2	Ec 22	Economics.....	2
CI 11	Hydraulics.....	2½	M 7	Differential Equations..	2½
		12½			12½
<i>Fourth Year</i>					
EL 17	Electrical Eng. III.....	2	EL 18	Electrical Eng. III.....	2
EL 19	Electrical Testing Lab..	2	EL 20	Electrical Testing Lab..	2
EL 23	Electrical Meas. Lab...	2	EL 24	Adv. Elec. Meas. Lab..	2
ME 35	Heat Engineering.....	2	ME 36	Heat Engineering.....	2½
S 1	Sociology.....	2	S 2	Sociology.....	2
EL 21	Electrophysics.....	1	EL 22	Electrophysics.....	2
ME 69	Testing Materials Lab..	1½			
		12½			12½
<i>Fifth Year</i>					
C 7	Engineering Conference	½	C 8	Engineering Conference	½
EL 25	Electrical Eng. IV.....	3	EL 26	Electrical Eng. IV.....	3
EL 27	Adv. Elec. Eng. Lab....	2	EL 28	Adv. Elec. Eng. Lab....	2
EL 29	Electrical Eng. V-A....	2½	EL 30	Electrical Eng. V-A....	2½
EL 31	Elec. Eng. V-B.....	2½	EL 32	Electrical Eng. V-B....	2½
EL 33	Adv. Exp. Investigations	2	EL 34	Adv. Exp. Investigations	2
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF ELECTRICAL ENGINEERING

PROFESSORS PORTER, SMITH, RICHARDS, and CLEVELAND;
MESSRS. ESSIGMANN and PIHL

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

EL 1 Electrical Engineering I

This course deals with the fundamental principles of D.C. machines, motional E.M.F., structural parts of machines, armature windings, armature reaction, commutation, subject matter which may be considered common to both generator and motor. In it also are considered the methods of field excitation and the characteristics of the shunt wound generator.

1 semester hour credit

EL 2 Electrical Engineering I

This course is a continuation of EL 1. It deals with the characteristics of the series and compound-wound generators, and the operating principles and characteristics of D.C. motors, shunt, series and compound both cumulative and differential together with the various methods of speed control.

1 semester hour credit

EL 5 Electrical Machinery

This course is concerned with the theory and application of the electrical equipment most often met by practicing engineers. Descriptions of the parts of the machines, their operating characteristics and of their special fields of usefulness are extended chiefly over shunt, series and compound direct current motors and generators, alternators, transformers, synchronous and induction motors. Consideration is given to auxiliary apparatus insofar as necessary to a good understanding of the functioning of the machinery as a whole.

Tests are made on various direct and alternating current machines. The object is to give the students facility in connecting and operating the machines as well as to observe in actual practice the characteristics taken up in the lectures. Outside reports are required to be written up for each experiment.

4 semester hour credits

EL 6 Electrical Measurements

The course comprises a brief study of measurements in general, and precision measure as applied to electrical measurements in particular. Resistance devices, galvanometers, ammeters, and voltmeters are next discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities: resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy; inductance, and magnetic induction. This part of the work involves the students' use of both visual and sound indicating devices. Some consideration is given to the principles and operation of vacuum tubes. Appropriate laboratory experiments are included.

2½ semester hour credits

EL 9 Electrical Engineering II

A study of electrostatic fields, force, and potential; magnetic fields; and the energy content of each. The elementary differential equations of circuits containing resistance, inductance, and capacity combinations are solved. Complex algebra as applied to the study of sinusoidal waves concludes the course.

1½ semester hour credits

EL 10 Electrical Engineering II

A study of single phase alternating currents and circuits, including series, parallel, and series-parallel combinations; Kirchhoff's laws; non-sinusoidal waves; power; and filters.

2 semester hour credits

EL 11 Electrical Engineering Laboratory

This is a laboratory course intended to develop a thorough understanding of the operating characteristics of the individual machines studied in course EL 1 and EL 2, including work and experiments on armature and field resistance measurement, heat runs, connection of D.C. generators, and speed variations in a shunt motor. As it is also the purpose of this course to inculcate correct methods of work and preparation of preliminary and final reports, no definite number of experiments is required, but the utmost emphasis is placed upon the quality of the data and style and content of the completed reports.

1 semester hour credit

EL 12 Electrical Engineering Laboratory

This course continues the approach outlined in EL 11 and consists of experiments on series and compound motors, stray power testing and compound generator characteristics.

1 semester hour credit

EL 13 *Electrical Measurements I*

This course is designed to acquaint the student with the theory of precision measure as applied to electrical measurement in particular. Some of the subjects covered are theory of measurements, directly and indirectly measured quantities, recording of observations, rules of significant figures, classification of error, law of error, characteristics of error, and laws of average deviation.

Most of the problems studied fall in the following two general classifications: (1) Given the precision measures of the directly measured quantities, to determine the precision measure of the indirectly measured quantity as calculated by the use of engineering equations which apply to measurements work. (2) Given the prescribed precision to be obtained in the indirectly measured quantity, to determine the precision measure of the directly measured components which enter into its calculation.

In this course parts and theory of operation of resistance devices, galvanometers, ammeters, and voltmeters are discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities: resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy. This part of the work involves the students' use of visual indicating devices.

The principles taught in this course are immediately applied in all experiments run in the measurements laboratory and so far as necessary in the machine testing laboratory.

2½ semester hour credits

EL 14 *Electrical Measurements II*

Resistance, capacitance, inductance, magnetic induction, A.C. power and energy are treated in this course, with a detailed discussion of the methods of measuring them. This phase of the subject involves the use of both visual and sound indicating devices, and includes some work on the uses of circuits and bridges designed for high frequency measurements and tube constant determination. The student is given a thorough discussion of the construction, theory of operation, method of use, sources of error, etc., of the types of measuring instruments used in commercial work and in the standardizing laboratory.

2 semester hour credits

EL 17 *Electrical Engineering III*

This course is a continuation of Electrical Engineering II. It deals principally with polyphase circuits. Both balanced and unbalanced circuits are considered. The unbalanced condition is studied both by use of Kirchhoff's Laws and by the method of symmetrical phase components.

2 semester hour credits

EL 18 Electrical Engineering III

A careful, thorough, and detailed study of the construction, theory, operating characteristics, and testing of transformers is the aim of this course. Particular attention is given to single phase and polyphase transformers used for power purposes. Special types of transformers studied include the constant current transformer, the auto-transformer, and instrument transformers.

2 semester hour credits

EL 19 Electrical Testing Laboratory

This course consists of a series of experiments involving the testing of machines. Preliminary reports are written by all students before the tests are performed in the laboratory. Experiments of the following type are used: measurement of stray load loss of D.C. motor, efficiency of machine by method of electrical supply of losses, electrical separation of losses, measurement of losses by retardation method, speed control of direct current motors by thyratrons.

2 semester hour credits

EL 20 Electrical Testing Laboratory

This is a continuation of EL 19 but the experiments are mostly on alternating current circuits and transformers. Typical experiments are studies of alternating current series and parallel circuits, ratio of transformation and core loss measurements for transformers, determination of the efficiency and voltage regulation of a transformer, transformer heat test, tests on a constant current transformer.

2 semester hour credits

EL 21 Electrophysics

The first part of this course is concerned with Faraday's Rule and the extended Ampere Rule, divergence of electrical vectors, Poisson's equation, and Maxwell's field equations and wave equations. Study is then made of molecular activity, and various properties of and measurements on electrons.

1 semester hour credit

EL 22 Electrophysics

Continuing EL 21 the topics considered are photo-electricity, X-rays, atomic structure and the spectrum, vacuum tubes, radio-activity, and the modern physics of matter and waves.

2 semester hour credits

EL 23 Electrical Measurements Laboratory

This course consists of a series of experiments emphasizing the principles developed in courses EL 13 and EL 14. The student becomes familiar with the use of the standard apparatus in use in testing laboratories. Particular stress is laid on the correct use of the apparatus, and precision discussions are required throughout.

The general experiments cover various methods of measuring resistance, resistivity, conductivity, electromotive force, current, inductance, mutual inductance, capacitance, hysteresis loss, etc. Further experiments are made in cable testing, magnetic testing, wave form determination, and the use of special apparatus.

Thorough training in the principles of precision of measurements is also given, and applied to each experiment performed.

2 semester hour credits

EL 24 Advanced Measurements Laboratory

This course concerns the use of laboratory and secondary standards and precision methods as applied to checking resistances, calibration of indicating and integrating instruments of various types.

It involves the use of the potentiometer, Weston laboratory standard instruments; precision model Kelvin Low Resistance and Carey-Foster Bridges; Westinghouse portable oscillograph, cathode ray oscillograph; ordinary, reflex, and logarithmic vacuum tube voltmeter, Anderson Bridge, Edgerton Stroboscope; low, medium, and high frequency oscillator; vacuum tube bridge; potential phase shifters and rotating standard. The work includes testing for characteristics and investigation of the action of multi-electrode tubes, thyatron, tungar rectifier and artificial telephone line.

Precision work is insisted on throughout. The student is trained to develop speed and quickness of manipulation, but never at the expense of quality and accuracy of the work.

2 semester hour credits

EL 25 Electrical Engineering IV

In this course a detailed study is made of alternating current synchronous machines. In addition to the study of the synchronous generator and the synchronous motor, considerable time is spent in discussing the problems involved in operating synchronous generators in parallel.

3 semester hour credits

EL 26 Electrical Engineering IV

This course is a continuation of EL 25. It deals with other types of alternating current machines. The machines studied in detail include the synchronous converter, the mercury arc rectifier, single phase and polyphase induction motors, induction generators, series and repulsion motors. The method of symmetrical phase components is used in the study of unbalanced conditions in certain types of motors.

3 semester hour credits

EL 27 Advanced Electrical Engineering Laboratory

This is a laboratory course to accompany EL 25 in alternating current machinery. The work includes tests on the heating, efficiency, and determination of the characteristics of various types of alternating current machinery, such as transformers, generators, and motors. A detailed preliminary study is made of each assigned experiment, involving the method to be used in obtaining the necessary data, and the manner of obtaining the required results from this data. This is embodied in a preliminary report. The student then does the necessary laboratory work to obtain the required data, and finally works up the whole into a detailed final report. A minimum of assistance is given by the instructor in the actual laboratory work, the initiative and resourcefulness of the student being depended on to the greatest extent.

2 semester hour credits

EL 28 Advanced Electrical Engineering Laboratory

This is a continuation of EL 27 and accompanies EL 26. Preliminary and final reports similar to those of EL 27 are required in this course but the experiments deal more largely with the various types of alternating current motors. Provision is also made, toward the latter part of this course, for some choice by the student as to the type of investigation or experiment he wishes to carry on.

2 semester hour credits

EL 29 Electrical Engineering V-A

This course is designed to give the student a thorough grounding in the theory and application of the various types of electron tubes. It is not a course in radio communication although, of course, the tubes used for this purpose are considered. The material covered deals with fundamental constants of the vacuum tube, equivalent and alternative plate and grid circuit theorems, paths of operation, maximum, and maximum undistorted power output, inter-electrode capacity and low power amplifiers.

2½ semester hour credits

EL 30 Electrical Engineering V-A

This course is based on material covered in EL 29 and takes up the discussion of the uses of thermionic tubes in measuring instruments, oscillographs, rectifying and amplifying circuits, oscillators, and modulators, and so on.

2½ semester hour credits

EL 31 Electrical Engineering V-B

This course given during the first semester of the senior year deals with the fundamentals of electrical transmission circuits. Hyperbolic functions and their application, the general differential equations of the transmission line, fundamental line constants, position angles, PI and T structures, are developed for the D.C. circuits.

2½ semester hour credits

EL 32 Electrical Engineering V-B

This course is a continuation of EL 31. It begins with the consideration of complex hyperbolic functions and then deals with the alternating current transmission circuit, the initial transient state, quarter and half wave line, and the fundamental properties of artificial lines and filter circuits.

2½ semester hour credits

EL 33 Advanced Experimental Investigations

All seniors in the Department of Electrical Engineering are required to complete a thesis or an equivalent amount of advanced experimental work in the laboratories. Seniors not receiving departmental approval of a thesis subject will be required to complete satisfactorily eight advanced experimental investigations. Two required investigations each will be given in A. C. Machinery, Electronics, and Transmission, and every student is expected to select an additional two in any one of the three fields.

Typical of the experiments available are the following: Motional impedance of a telephone receiver, D.C. artificial transmission line, a study of Blondel's two reaction theory of salient pole synchronous machine, a study of power angle characteristics of synchronous machines, wavemeter calibration, and a study of the thyatron inverter.

2 semester hour credits

EL 34 Advanced Experimental Investigations

A continuation of EL 33 in which the following experiments are offered: Magnetic comparitor and Thompson permeameter, power angle characteristics of a synchronous machine, a study of the complete speed-torque curve of a squirrel cage induction motor, and measurements of R, L, and C with a radio frequency bridge. Students who desire to investigate other problems for which equipment is available will be permitted to do so with the approval of the instructor in charge.

2 semester hour credits

IV Chemical Engineering

The chemical engineer has been well defined as a "professional man experienced in the design, construction, and operation of plants in which materials undergo chemical and physical change." It is the duty of the chemical engineer to cut the costs, increase production, and improve the quality of the products in the industry.

The chemical engineer must possess a working knowledge of the fundamental sciences, he must understand and know how to work with men, and he must recognize in his work the "correct appraisement of values and costs." In addition, he must possess the ability to apply his knowledge to the development and operation of chemical processes and plants.

The curriculum furnishes instruction in the fundamental sciences of chemistry, physics, and mathematics; the elements of electrical and mechanical engineering; and in the basic unit chemical engineering operations, such as heating, evaporating, filtering, distilling, crushing, extracting, drying, and so forth. Courses of a more liberal nature are also available as electives in order that the student may become acquainted with fields of knowledge other than chemical engineering and thus broaden his educational background.

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
	<i>Second Year</i>
M 5 Differential Calculus	M 1 Algebra, M4 Analytic Geometry
ME 20 Applied Mechanics	P 1 Physics I
Ch 11 Qual. Anal. Lab.	Ch 2 Inorganic Chemistry
Ch 9 Qualitative Analysis	Ch 2 Inorganic Chemistry
EL 5 Electrical Machinery	P 2 Physics I
	<i>Third Year</i>
ME 22 Strength of Materials	ME 20 Applied Mechanics
Ch 15 Quantitative Analysis	Ch 10 Qualitative Analysis
M 7 Differential Equations	M 6 Integral Calculus
	<i>Fourth Year</i>
ChE 3 Unit Operations	ChE 1 Flow of Fluids
	<i>Fifth Year</i>
ChE 7 Inorganic Chem. Tech.	Ch 9 Qualitative Analysis
Ch 37 Org. Chemistry	Ch 32 Org. Chemistry
Ch 43 Thermodynamics	ME 30 Heat Engineering

IV. Chemical Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3	M 4	Analytic Geometry....	5
M 3	Trigonometry.....	2	PE 2	Hygiene.....	1
D 1	Graphics I.....	3	D 2	Graphics II.....	3
P 1	Physics I.....	3	P 2	Physics I.....	3
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	Inorganic Chem.	4
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
Ps 1-A	Orientation.....	0			
		18			19
Second Year					
M 5	Differential Calculus...	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory....	1	P 6	Physics Laboratory....	1
Ch 9	Qualitative Analysis...	3	ME 20	Applied Mechanics....	3
Ch 11	Qual. Analysis Lab. ...	2½	Ch 14	Quant. Analysis.....	2
Ch 51	Sources of Information..	1	Ch 16	Quant. Analysis Lab... 1½	
		12½			12½
Third Year					
ME 21	Applied Mechanics....	3	Ch. 44	Physical Chemistry....	2½
M 7	Differential Equations..	2½	ME 22	Strength of Materials... 3	
Ch 17	Quantitative Analysis..	2	ME 30	Heat Engineering.....	3
Ch 19	Quant. Analysis Lab. ...	1	Ec 22	Economics.....	2
Ec 21	Economics.....	2	ChE 2	Ind. Stoichiometry....	2
ChE 1	Flow of Fluids.....	2			
		12½			12½
Fourth Year					
ChE 3	Unit Operations.....	3	ChE 4	Unit Operations.....	3
ChE 5	Unit Operations Lab... 1½		ChE 6	Unit Operations Lab... 1½	
Ch 31	Organic Chemistry....	2	Ch 32	Organic Chemistry....	2
Ch 33	Organic Chem. Lab....	1	Ch 34	Organic Chem. Lab....	1
S 1	Sociology.....	2	S 2	Sociology.....	2
Ch 45	Physical Chemistry....	3	Ch 46	Physical Chemistry....	3
		12½			12½
Fifth Year					
ChE 9	Chemical Proc. Lab....	3	ChE 10	Chemical Eng. Projects	4
C 7	Engineering Conference	½	C 8	Engineering Conference	½
Ch 37	Org. Chemistry.....	2	IN 6	Indus. Management II..	2
Ch 39	Org. Chem. Lab.....	1	EL 8	Elec. Machinery.....	4
IN 5	Indus. Management I ..	2	ChE 8	Organic Chem. Tech... 2	
Ch 61	Thermodynamics.....	2			
ChE 7	Inorganic Chem. Tech..	2			
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper class year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF CHEMICAL ENGINEERING

PROFESSORS BAKER and MORGAN; MR. CODY

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

ChE 1 Flow of Fluids

A study of methods of determining rates of flow and power consumption of fluids flowing through pipe lines. This course differs from the usual course in hydraulics chiefly in the amount of emphasis placed on the flow of gases and oils.

2 semester hour credits

ChE 2 Industrial Stoichiometry

This is essentially a problem course developed around the study of fuels and combustion. Special attention is given to principles underlying the methods of calculation which are of value to the chemical engineer.

1½ semester hour credits

ChE 3 Unit Operations

This course consists of a study of the mechanical operations peculiar to the chemical industry. Such unit operations as flow of heat, evaporation, and humidity control are considered. Many problems of a practical nature are solved during the course.

3 semester hour credits

ChE 4 Unit Operations

This is a continuation of ChE 3. The unit operations studied are drying, crushing, separation, filtration, distillation, and gas absorption.

3 semester hour credits

ChE 5 Unit Operations Laboratory

This laboratory course is based on the unit operations studied in ChE 3. The squad system is used. Experiments are performed on a small-scale plant equipment that has been specially designed or selected for the purpose. Detailed reports are required.

1½ semester hour credits

ChE 6 Unit Operations Laboratory

This is a continuation of ChE 5. Experiments are performed in the unit operations which are being studied simultaneously in ChE 6.

1½ semester hour credits

ChE 7 Inorganic Chemical Technology

A study of the processes and manufacturing methods used in the more important industries based on inorganic chemical technology. Existing material and economic relationships are emphasized. Plant inspection trips and problems pertaining to the industries studied are included.

2 semester hour credits

ChE 8 Organic Chemical Technology

The course consists of a study of industrial organic chemical processes. An attempt is made to co-ordinate the fundamental principles of organic synthesis with the requirements of industrial plants. Attention is given to the special features which must be considered in the design and construction of equipment used for the production of industrial organic chemicals.

2 semester hour credits

ChE 9 Chemical Process Laboratory

This course includes a consideration of the various problems which arise during the evolution of a manufacturing process. The study is begun with a survey of the literature and is continued in the laboratory. Procedures are varied systematically and the effect on the efficiency of the process noted. The principle of economic balance is taken into consideration whenever possible. Small-scale industrial equipment is used to get operating data necessary for the selection or design of large-scale equipment. Reports of progress are required during the course. A report on equipment and operating technique required for large-scale production terminates the course.

3 semester hour credits

ChE 10 Chemical Engineering Projects

Research problems in chemical engineering and applied chemistry are assigned to students for solution. The course is designed to develop individual initiative and self-reliance. Students qualified by industrial experience are assigned problems suggested by co-operating firms which are worked out under the joint supervision of plant engineers and members of the staff.

4 semester hour credits

v Industrial Engineering

Industrial engineering is a program of study in which the student is given a foundation in the elementary and tool subjects of mechanical engineering combined with an intensive program of study in business management and selected engineering courses which are specially designed for men who seek positions in the administration and management of industrial enterprises.

Since the fundamental training for a prospective mechanical or industrial engineer is essentially the same, the two groups are combined for instructional purposes during the freshman, sophomore, and middle years. The attention of industrial engineering students is called to the following courses offered in these years which constitute a part of the strictly professional training for becoming an industrial engineer:

IN 3 Production Processes
IN 4 Production Processes
ME 29 Heat Engineering

ME 1 Mechanism
EL 5 Electrical Machinery
D 4 Machine Drawing

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
	<i>Second Year</i>
M 5 Differential Calculus	M 1 Algebra, M4 Analytic Geometry
ME 20 Applied Mechanics	P 1 Physics I
EL 5 Electrical Machinery	P 2 Physics I
	<i>Third Year</i>
ME 22 Strength of Materials	ME 20 Applied Mechanics
	<i>Fourth Year</i>
ME 23 Strength of Materials	ME 22 Strength of Materials
IN 24 Statistics	IN 23 Statistics
	<i>Fifth Year</i>
IN 9 Cost Accounting	IN 8 Industrial Accounting
IN 25 Industrial Plants	ME 23 Strength of Materials
	IN 3, 4 Production Processes
IN 26 Industrial Plants	IN 6 Industrial Management
	ME 29 Heat Engineering

V. Industrial Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours
<i>First Year</i>					
E 1	English I.....	3	E 2	English I.....	3
M 1	Algebra.....	3	M 4	Analytic Geometry....	5
M 3	Trigonometry.....	2	PE 2	Hygiene.....	1
D 1	Graphics I.....	3	D 2	Graphics II.....	3
P 1	Physics I.....	3	P 2	Physics I.....	3
Ch 1 or Ch 3	General Chemistry	4	Ch 2 or Ch 4	Inorganic Chemistry	4
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
Ps 1-A	Orientation.....	0			
		18			19
<i>Second Year</i>					
M 5	Differential Calculus...	3	M 6	Integral Calculus.....	3
P 3	Physics II.....	2	P 4	Physics II.....	2
P 5	Physics Laboratory.....	1	P 6	Physics Laboratory....	1
IN 3	Production Processes I..	2½	IN 4	Production Processes II.	1½
EL 5	Electrical Machinery...	4	ME 20	Applied Mechanics....	3
			D 4	Machine Drawing.....	2
		12½			12½
<i>Third Year</i>					
ME 21	Applied Mechanics....	3	ME 22	Strength of Materials ..	3
ME 1	Mechanism.....	3	EL 6	Electrical Measurements	2½
ME 29	Heat Engineering.....	2	ME 30	Heat Engineering.....	3
Ec 21	Economics.....	2	Ec 22	Economics.....	2
CI 11	Hydraulics.....	2½	CI 12	Hydraulics.....	2
		12½			12½
<i>Fourth Year</i>					
ME 23	Strength of Materials...	2	ME 42	Heating and Air Cond.	2
IN 5	Industrial Management I	2	IN 6	Indust. Management II.	2
IN 7	Industrial Accounting..	2	IN 8	Industrial Accounting..	2
IN 23	Statistics.....	2½	IN 24	Statistics.....	2½
S 1	Sociology.....	2	S 2	Sociology.....	2
ME 61	Mechanical Eng. Lab...	2	ME 62	Mechanical Eng. Lab...	2
		12½			12½
<i>Fifth Year</i>					
C 7	Engineering Conference	½	C 8	Engineering Conference	½
IN 9	Cost Accounting.....	2½	IN 10	Cost Accounting.....	2½
IN 15	Sales Engineering.....	2½	IN 16	Personnel Adm.....	2
IN 11	Methods Engineering ..	2½	IN 14	Industrial Finance.....	2½
IN 21	Contracts.....	2	IN 18	Sales Eng. Problems....	2½
IN 25	Industrial Plants.....	2½	IN 26	Industrial Plants.....	2½
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 147 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF INDUSTRIAL ENGINEERING

PROFESSORS KNOWLES, ALEXANDER, BRUCE, and THOMSON;
MR. CRUICKSHANK

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

IN 3 Production Processes I

This is a descriptive course in which are studied the methods employed in foundry work and shop practice, including the wood working and machine shop.

The work is composed largely of demonstrations by the instructor, covering the principles of molding for the purpose of showing the reasons for draft and the special features of pattern construction. The names and characteristics of materials, equipment, and machines used in the foundry are taken up in detail, and the methods of tempering sand and making simple green sand molds explained.

The construction, operation, and uses of the various machine tools, such as the lathe, boring mill, milling machine, drill press, grinder, planer, gear cutter, and shaper are explained by lectures and demonstrations.

2½ semester hour credits

IN 4 Production Processes II

This course is designed to acquaint the student with the fundamental principles of tool engineering as applied in the modern manufacturing plant.

The tools used in production are discussed and their care and maintenance illustrated.

Considerable time is devoted to jig and fixture design. Calculations are developed which may be used to determine relative costs and advantages in using various types of shop equipment.

1½ semester hour credits

IN 5 Industrial Management I

The course in Industrial Management places emphasis on the administrative phases of factory and plant operation. It deals with the location of the plant; plant design, structure, and plant services; plant layout; standardization, simplification, and specialization; and the public relations of industry.

2 semester hour credits

IN 6 *Industrial Management II*

This course is a continuation of Industrial Management IN 5. It deals with the control of plant operations. Each department of a modern industrial concern is considered, emphasis being placed on the organization and management problems confronted and how they may be handled, with the intention that the student shall become familiar with the activities and general working of each department and the relationship which the departments hold to one another and to the business as a whole. In detail are considered: budgeting, standards of performance, wage systems, organization, routing, scheduling, dispatching, inventory control, quality control, and visual controls such as the organization chart, planning board, and departmental report. Considerable attention is given to the distribution of overhead expenses and standard costs.

2 semester hour credits

IN 7 *Industrial Accounting*

A course designed for the engineer studying accounting for the first time, including the elements of books of original and final entry, the construction and analysis of income statements, balance sheets, work sheets, and the transactions involving interest, discounts, notes, and drafts.

2 semester hour credits

IN 8 *Industrial Accounting*

A continuation of course IN 7 presenting the accounting problems of partnerships, corporations, manufacturing businesses, as well as miscellaneous problems on accounting.

2 semester hour credits

IN 9 *Cost Accounting*

A thorough study of the principles of costing process, job order and special order manufacturing, through the presentation and solution of actual cost problems.

2½ semester hour credits

IN 10 *Cost Accounting*

A continuation of course IN 9, presenting cost systems, standard costs and the relationships of cost, price, and profits.

2½ semester hour credits

IN 11 Methods Engineering

This course comprises (1) a detailed study of time and motion study work; (2) a complete study and actual practice in micro-motion which is the use of motion pictures in the motion study work; (3) a preparation of simo-charts (the use of colored charts and symbols called Therbligs which show all the elements in an operation cycle; (4) the making of process charts which is the use of specifically designed symbols, or industrial shorthand, to record motion analysis.

2½ semester hour credits

IN 14 Industrial Finance

The course in Industrial Finance is divided into two parts; the first half of the course presents the differences in the organization of partnerships, corporations, individual proprietorships, joint-stock companies, and holding companies.

The second half of the course deals with problems of financial analysis. Industries are examined to determine their financial condition; their position in relation to similar concerns; the proportion of their fixed and variable expenditures; and the effect of price cutting and price changes on their sales volume, costs, and capital structure. Care is taken to give the student a basis for determining what constitutes sound financial policy for any industrial enterprise.

2½ semester hour credits

IN 15 Sales Engineering

This course in the principles of marketing is designed to acquaint the engineering student with the field of distribution. It includes a complete study of the functions of marketing, the institutions and middle-men of the market, a study of the trade channels used to market specific commodities, placing particular emphasis on industrial goods.

2½ semester hour credits

IN 16 Personnel Administration

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scales, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans and labor union, and management relationships are given attention.

2 semester hour credits

IN 18 *Sales Engineering Problems*

This course is a continuation of IN 15. It presents problems and case material for use in making application of the principles of marketing industrial goods. Considerable time is devoted to the study of the regulation and control of marketing processes and institutions by governmental agencies and legislation.

2½ semester hour credits

IN 21 *Contracts*

Preparation for a career as an industrial engineer demands an understanding of the fundamental legal principles upon which modern business transactions are based. The course in Contracts treats of the common law rules which underlie all branches of business law. The study of cases and decisions is supplemented by lectures and assigned readings in textbooks in order to develop a thorough understanding of the essentials of a valid contract such as offer and acceptance, consideration and form. The interpretation, operation and discharge of contracts are also considered. Such topics as agreement, competent parties, reality of consent, legality of object, sealed instruments and the Statute of Frauds are treated in detail.

2 semester hour credits

IN 23 *Industrial Statistics*

The increasing use of statistics in business and in the field of industrial engineering makes essential an understanding of the fundamental methods and applications of statistical analysis. In this course the important topics considered include the following: the collection of statistical data; the presentation of statistical data in tabular and graphic forms; and the uses and construction of frequency distributions, averages, measures of dispersion and skewness, and the normal curve. Specific attention is given to the practical uses and limitations of statistics in the work of the industrial engineer.

2½ semester hour credits

IN 24 *Industrial Statistics*

Time series analysis receives major consideration in this course. The standard procedures for measuring, separating, and eliminating trend, periodic, seasonal, cyclical, and irregular movements of time series are carefully studied. Each student is required to analyze a time series related to his co-operative employment or to a field of industry in which he has especial interest. The construction of index numbers, the use of currently published index numbers, correlation, and business forecasting complete the course content. Particular regard is paid to the internal use of statistics in industrial concerns.

2½ semester hour credits

IN 25 *Industrial Plants*

This course includes the principles involved in the erection of an industrial plant, and the installation of its machines and equipment. Different types of structures are discussed with respect to details such as foundations, walls, columns, floors, windows, and so forth. Calculations and layout for a typical mill are carried out. Another problem consists of the calculation and layout of a machine shop which includes the power requirements and placement of machines, consideration being given to the optimum conditions of maximum production and the most efficient routing of a product.

2½ semester hour credits

IN 26 *Industrial Plants*

This course, a continuation of IN 25, includes a problem on the heating and air conditioning of an industrial plant. The heating requirements in the winter and the cooling needs in the summer are calculated for a particular building. Another problem consists of the layout of a plant to serve a certain industry; determining the machines essential for the output of a given product; the power requirements for the plant, and the advisability of generating the power within the plant or purchasing it from outside; storage needs; arrangement of machines and material handling equipment; determination of belting sizes and shafting; and the cost of operation of the factory.

2½ semester hour credits

Chemistry

PROFESSORS VERNON, STRAHAN, MCGUIRE, and ZUFFANTI; DR. LUDER; MESSRS. BROWN, MCKENZIE, GIELLA, DUBOIS, VINAL, and HANSEN

Ch 1 General Chemistry

A course designed for those who have had chemistry before entering college. The fundamental idea of matter and energy; the properties of gases, liquids, and solids; molecular weights; equations, atomic structure, classification of the elements; ionic reactions; and the chemistry of the non-metals are among the topics which are covered in the course. Two lectures, one recitation, and a three-hour laboratory period comprise the weekly schedule of instruction.

4 semester hour credits

Ch 2 Inorganic Chemistry

A continuation of Ch 1 Inorganic Chemistry. Modern ideas covering the theory of solutions of electrolytes are discussed together with experimental facts. The chemistry of the metals is covered thoroughly, and time is devoted to an introduction to organic chemistry. The latter part of the course is given to qualitative analysis with particular emphasis on the laboratory work. The plan of instruction is identical with that of Ch 1.

4 semester hour credits

Ch 3 General Chemistry

A course intended for those who have not had chemistry in high school. The content is similar to that of Ch 1, but the treatment is such that no prior knowledge of chemistry is necessary. Two lectures, one recitation, and a three-hour laboratory period comprise the weekly schedule of instruction.

4 semester hour credits

Ch 4 Inorganic Chemistry

A continuation of Ch 3 with a course content and schedule of instruction similar to Ch 2.

4 semester hour credits

Ch 9 Qualitative Analysis

A study of fundamental qualitative laws and principles as applied to the separation of ions. Mass action law, ionic equilibrium, and oxidation-reduction are among the topics covered.

3 semester hour credits

Ch 11 Qualitative Analysis Laboratory

Laboratory work on detection of anions and cations. The experiments are designed to amplify the class work and give experience in the analysis of unknown substances.

2½ semester hour credits

Ch 14 Quantitative Analysis

Each of the major operations such as weighing, measurement of volumes, titration, filtration, ignition, and combustion, is considered from the standpoint of the theoretical principles involved and with due consideration of the manipulative technique necessary.

2 semester hour credits

Ch 16 *Quantitative Analysis Laboratory*

Acidimetry and alkalimetry, oxidation and precipitation methods as used in volumetric work comprise the first part of the laboratory work. This is followed by simple gravimetric analysis.

1½ semester hour credits

Ch 17 *Quantitative Analysis*

A continuation of Ch 14. Advanced gravimetric analysis and systematic mineral procedures are studied together with the common technical methods.

2 semester hour credits

Ch 19 *Quantitative Analysis Laboratory*

A continuation of Ch 16. Advanced gravimetric, electrolytic, combustion and optical methods are used. In the latter half of the course actual industrial technical methods are used.

1 semester hour credit

Ch 31 *Organic Chemistry*

A study of the basic principles of the aliphatic organic compounds. The resemblance of classes is stressed and emphasis is placed on genetic charts. The industrial significance of the subject is discussed to show the practical nature of organic chemistry.

2 semester hour credits

Ch 32 *Organic Chemistry*

A continuation of Ch 31 dealing with the preparation and characteristic reactions of the aromatic organic compounds. Special attention is given to polymerization, diazotization, dyes, and the use of catalyst, nitration, and sulfonation.

A few of the more important heterocyclic compounds are studied.

2 semester hour credits

Ch 33 *Organic Chemistry Laboratory*

Preparations and reactions designed to teach the laboratory technique involved in organic chemistry. The method of keeping notes in the work performed and reactions involved is stressed.

1 semester hour credit

Ch 34 *Organic Chemistry Laboratory*

This is a continuation of Ch 33. The preparations in this course serve to acquaint the student with such types of chemical reactions as sulfonation, the Grignard reaction, the Perkins reaction, Skraup's synthesis, the Friedal-Crafts' reaction, and the preparation of dyes.

In addition to the manipulation techniques taught in Ch 33, this course introduces the use of vacuum distillations, fractional crystallization, and separations by physical and chemical means.

1 semester hour credit

Ch 37 Organic Chemistry

A continuation of Ch 32 and includes a study of the preparation and reactions of heterocyclic and alicyclic compounds.

2 semester hour credits

Ch 39 Organic Chemistry Laboratory

The purpose of this course is to familiarize the student with the chemical and physical tests used in qualitative organic analysis. A series of experiments, based on the classification of reactions of organic compounds, serves as a basis for the examination of simple liquid and simple solid compounds and the preparation of suitable derivatives of them.

1 semester hour credit

Ch 44 Physical Chemistry

This course begins with a short resume of the field of physical chemistry, and its relationship to the other courses in chemistry and chemical engineering. Following this, atomic and molecular weights, and the properties of gases, liquids, solids, ionized, non-ionized, and colloidal solutions are taken up.

2½ semester hour credits

Ch 45 Physical Chemistry

A continuation of Ch 44, and includes a consideration of the following topics: rates of reaction, homogeneous and heterogeneous equilibrium, and thermochemistry.

3 semester hour credits

Ch 46 Physical Chemistry

A continuation of Ch 45 including electrical conductance, electrolytic equilibrium, electrolysis, photochemistry and atomic structure.

3 semester hour credits

Ch 51 Sources of Information

This course is intended to acquaint the chemical student with the constantly increasing volume of scientific literature pertaining to the field of chemistry.

After a brief outline of the entire field of scientific literature, and a description of various methods of library procedure, the various available sources of scientific information are investigated. A series of individual library problems, in which the student is required to apply the information obtained in the classroom, forms a very important part of the course.

1 semester hour credit

Ch 61 Thermodynamics

The development and application of thermodynamics to the treatment of chemical engineering problems.

2 semester hour credits

Drawing

PROFESSORS TOZER and MESERVE; MESSRS. CUSHMAN, CLEVELAND, SANDERSON, and ROOK

D 1 Graphics I

This course comprises a complete study of shape description in both orthographic and pictorial form. It provides a thorough foundation for the study of working drawings. The work is laid out according to the following divisions: care and use of instruments, lettering, geometric constructions including the conic, involute and cycloidal curves, orthographic projection including multiplanar and axonometric drawing, oblique and perspective projection, technical freehand sketching, development, screw-threads, sectioning, dimensioning, and tracing.

3 semester hour credits

D 2 Graphics II

This course comprises a complete study of the theory of projection. It is designed to develop the power to visualize and solve practical problems in spacial relations. In addition to point, line, and plane problems, the course includes a study of shadows, solid intersections, developable and warped surfaces.

3 semester hour credits

D 3 Engineering Drawing

A course similar to D 4 except that it is designed to be of particular value to students of electrical engineering.

2 semester hour credits

D 4 Machine Drawing

Detail working drawings of machine parts and assembly drawings of simple machines are made in accordance with best commercial practice. Such simple phases of mechanism as are necessary to a complete understanding of machine drawing are included in the course.

2 semester hour credits

Economics

PROFESSOR LAKE

Ec 21 Economics

After an analysis of the main characteristics of our modern economic order, attention is turned to the fundamental economic laws and principles governing the production of economic goods, the organization of business enterprise, money, banking, the business cycle, control of the price level, and international trade. Case material is used freely.

2 semester hour credits

Ec 22 Economics

A continuation of Ec 21. The first part of the course deals with the principles of price determination under competitive and monopolistic conditions, and the principles underlying the distribution of wealth and income into wages, interest, and profits. Consideration is then given to the major aspects of the economic problems of agriculture, public utility regulation, labor, consumption, public finance, and economic reform.

2 semester hour credits

English

DEAN MELVIN; PROFESSORS HOLMES and MARSTON; DR. REYNOLDS;
MESSRS. CAPON, HUNTING, NORVISH and HOFFMANN

E 1 English I

A course in composition with especial emphasis on exposition. Principles of grammar and rhetoric are reviewed rapidly but thoroughly. Contemporary essays are studied both for their value as models and as enrichment of the student's background. Themes on subjects largely drawn from or related to the student's life and study are a weekly requirement.

3 semester hour credits

E 2 English I

A continuation of E 1. Toward the end of the term a careful study is made of letter writing.

3 semester hour credits

Engineering Conference

PROFESSORS NIGHTINGALE, TOWLE, EVERETT, OBERG AND MORGAN

C 7 Engineering Conference

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in his class those students who have been placed and supervised on co-operative work by him. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandizing. Prominent men who are leaders in the fields of employment counselling, business, or engineering present the employers' viewpoint. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services," thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

½ semester hour credit

C 8 Engineering Conference

This course is the sequel to C-7 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course will culminate in the attainment by each student of his after-graduation job.

½ semester hour credit

Geology

PROFESSOR PUGSLEY

Gy 1 Geology

A study of earth movements and various terrestrial applications of solar energy. Lectures on fundamental general facts as to origin and movements of the earth, weathering, work of winds, underground and surface waters, glaciers and the glacial period, lakes and swamps, and vulcanism.

2 semester hour credits

Gy 2 Geology

Course Gy 1 is continued with such topics as mountain formation, oceanic life, atmosphere, and meteorology. A considerable portion of time is given to the study of igneous, sedimentary and metamorphic rocks, supplemented by laboratory and field work.

2 semester hour credits

Mathematics

PROFESSORS SPEAR and HASKINS; DR. LACOUNT; DR. WALLACE;
MESSRS. SEWELL, DEAN, COMBELLACK, and HEILPRIN

M 1 College Algebra

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid although thorough review of the fundamentals of algebra precedes this. This solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

3 semester hour credits

M 3 Trigonometry

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry both in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are: the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines; cosines, tangents, half-angles; solution of oblique and right triangles; transformation and solution of trigonometric and logarithmic equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in engineering practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing DeMoivre's theorem, and the exponential form of the complex number.

2 semester hour credits

M 4 *Analytic Geometry and Introduction to Calculus*

This being a basic course in preparation for any further study of mathematics, it requires a thorough knowledge of the fundamentals of algebra. The course covers cartesian and polar coordinates; graphs; the equations of simpler curves derived from their geometric properties; thorough study of straight lines, circles, and conic sections; intersections of curves; transformation of axes; plotting and solution of algebraic equations of higher order and of exponential, trigonometric, and logarithmic equations; loci problems. The general equation of the second degree is thoroughly analyzed in the study of conic sections. Some time is devoted to curve fitting from empirical data.

Explicit and implicit functions, dependent and independent variables, some theory of limits, continuity and discontinuity are given special attention both from the algebraic as well as geometric points of view. Some theorems on the infinitesimal are introduced and a study is made of infinity and zero as limits. Relative rates of change, both average and instantaneous, and the meaning of the slope of a curve follow. The differential and the derivative as applied to algebraic functions with the geometric interpretation is then studied. Simple applications with interesting practical problems help to develop the interest here and lay a solid foundation for the study of the calculus. The introduction of the differential at the same time with the derivative helps considerably to bridge the large gap which usually exists when the student passes from the study of the elementary analytic geometry to the infinitesimal of calculus.

5 semester hour credits

M 5 *Differential Calculus*

The differential is introduced and defined at the outset of the course together with the derivative, geometric and practical illustrations are given of both, and both are carried along throughout the course. The work in the course consists of differentiation of algebraic, trigonometric, exponential, and logarithmic functions, both explicit and implicit; slopes of curves, maxima and minima with applied problem; partial differentiation; derivatives of higher order; curvature; points of inflection; related rates; velocities, acceleration; expansion of functions; series. Although the subject matter deals with considerable theory, constant sight is kept of the practical application of the theory. The geometric interpretation of every new subject is carefully defined and problems are continually solved dealing in practical applications of the theory in geometry, physics, and mechanics.

3 semester hour credits

M 6 *Integral Calculus*

This is a continuation of Calculus M 5, and deals with integration as the inverse of differentiation as well as the limit of summation. The topics covered are methods of integration; use of integral tables; definite integrals; double and triple integrals; areas in rectangular and polar co-ordinates; center of gravity; moment of inertia; length of curves; volumes of solids; areas of surfaces of revolution; volumes by triple integration; practical problems in work, pressure, etc., depending on the differential and integral calculus for solution, solution of simpler differential equations.

3 semester hour credits

M 7 *Differential Equations*

The elementary theory of differential equations and the solution of certain ordinary and partial differential equations is offered here as a general course in mathematics. Although principally a problem course in solving differential equations, properties of the equations and of their solutions are deduced, and applications to the various fields of engineering, particularly electrical engineering, are analyzed.

2½ semester hour credits

Physics

PROFESSORS MUCKENHOUP, COOLIDGE, JOHNSON, and WELCH;
MESSRS. BELYEA, HILLI and COOK

P 1 *Physics I*

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces and equilibrium under the action of concurrent forces.

3 semester hour credits

P 2 *Physics I*

This is a thorough course in magnetism and electricity covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

3 semester hour credits

P 3 Physics II

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

All lectures in physics are accompanied by appropriate demonstrations.

2 semester hour credits

P 4 Physics II

The topics studied are thermometry, expansion of solids, liquids, and gases; calorimetry; change of state including latent heat of fusion and vaporization (sublimation); triple point diagram; conduction and radiation; and the mechanical equivalent of heat.

2 semester hour credits

P 5 Physics Laboratory

This course consists of experiments in mechanics, light, electricity, and magnetism performed by each student supplementing the lecture and class room work of courses P 1, P 2, and P 3. The experiments on mechanics include: the use of the vernier, micrometers and spherometer, the calculation of true weights, the funicular polygon, gyroscopic motion, simple harmonic motion and the determination of areas by means of the planimeter. Other experiments in this course include plotting the magnetic field about a bar magnet and the determination of the pole strength and field strength of the magnet, the position of images in a combination of lenses and one experiment on electrostatics.

1 semester hour credit

P 6 Physics Laboratory

A continuation of the experiments started in P 5 including experiments on sound and heat. Some of the experiments of this course are: the modulus of elasticity, the determination of the velocity of sound, the coefficient of cubical expansion of mercury, the air thermometer, the determination of the mechanical equivalent of heat, the study of the maximum and minimum thermometers, and the use of the spectroscope in the study of the bright line and solar spectra. The experiments of this course supplement the class work of courses P 1, P 2, P 3, and P 4.

1 semester hour credit

P 7 Physics Laboratory

This course is very similar to P 5 but broader in scope and designed particularly for electrical engineering students.

2 semester hour credits

P 8 Physics Laboratory

A course similar in content but broader in scope than P 6 and designed particularly for electrical engineering students.

2 semester hour credits

Physical Education

PROFESSORS PARSONS and TATTON; MESSRS. DUNN, GALLAGHER,
KOPP, LAVEAGA, and HULTGREN

PE 3-4 Physical Training

All first year students are required to take Physical Training. Health, strength, and vitality do not come by chance, but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of life.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, hockey, football, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from Physical Training because of physical defects are required to present a petition to the faculty supported by a physician's certificate.

PE 2 Hygiene

One class hour a week is devoted to the study of information closely related to the Physical Training work and to personal and mental hygiene. For each class lecture, the student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

1 semester hour credit

Social Sciences

PROFESSORS ESTES and HAVICE

Ps 1-A Orientation Problems

This course is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency and mental health in the college environment. Lectures, assigned reading, and individual conferences.

S 1 Introduction to Sociology

In presenting a survey of the origins and sources of human society, this study provides orientation for the course in principles and problems which follows. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

2 semester hour credits

S 2 Principles of Sociology

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires a survey of the subject.

2 semester hour credits

Elective Liberal Courses

B 50 General Biology

This is a comprehensive course in biology dealing with animals and plants and their relation to their environment. The fundamental phenomena of living things are stressed. General biological laws and theories are discussed.

Laboratory work illustrates the lectures.

4 semester hour credits

E 50 *Shakespeare*

An introductory college reading course in Shakespeare in which the emphasis will be placed upon character study, development of plot, and interpretation.

Four plays: *Henry IV, Part I*, *Romeo and Juliet*, *Twelfth Night*, and *Othello* will be read in class; one play, probably either *Henry V* or the *Tempest*, will be assigned for outside reading.

The purpose of the course is not only to develop in the student an appreciation of Shakespeare but also to train him in sound habits of reading.

DEAN MELVIN

2 semester hour credits

E 51 *The Short Story*

This course is intended to give the student training and practice in the reading of the short story. It includes a brief account of the origin and development of the short story as a fictional form and the study of the technique of character portrayal, plot construction, setting, and theme. Short stories are assigned for reading and analysis.

PROFESSOR HOLMES

2 semester hour credits

GA 51 *History of Architecture*

This course is designed to cultivate an understanding and appreciation of the principal architectural monuments from the earliest times up to the 16th century A.D. This includes a study of the architecture of Egypt and Mesopotamia, Greece and Rome, the Medieval period, and the Italian Renaissance.

Lectures are illustrated by lantern slides and the work of the course includes textbook and collateral readings, regular quizzes and examinations, and some study at nearby museums.

PROFESSOR MESERVE

2 semester hour credits

Gv 51 *American Constitutional Law*

This course contemplates a brief study of the history of constitutional government from its origin in the struggle in England between King and parliament over the taxing power; the continuation of that struggle between the colonial assemblies and the parliament; the formation of the confederation of the states; the weaknesses of the confederation that rendered it inadequate; conditions that made it necessary to bring about "a more perfect union"; how the national constitution was made conferring all necessary powers upon the national government and making the constitution the supreme law of the land.

A brief study of political and legal science developed through the critical consideration of cases "selected in part for their historical value but chiefly to provide, in the language of the Supreme Court a maximum of constitutional principles in a minimum of time." The presentation in a condensed form of the fundamental law of the state and nation together with the rules and decisions which have developed and accumulated in the construction and application of constitutional provisions.

PROFESSOR BRUCE

2 semester hour credits

Gy 50 Geology

(Not Open to Civil Engineering Students)

This is a study of earth movements and the various terrestrial applications of solar energy. The more important geological processes — erosion, sedimentation, deformation, and eruption — are taken up and discussed. The course includes lectures on the broader structural features of the earth's crust and the application of the principles of structural geology to practical engineering problems.

PROFESSOR PUGSLEY

2 semester hour credits

M 50 History of Mathematics

Beginning with a discussion of how primitive man may have developed the concept of number, the course traces the development of the various branches of mathematics with which a student studying calculus is already familiar. Special attention is given to the social factors that influenced these developments as well as to a study of the personalities, lives, and contributions of the outstanding mathematicians up to the time of Gauss.

MR. SEWELL

2 semester hour credits

Ph 50 Philosophy

After surveying the nature, purpose, and value of philosophy, this course considers such basic principles as the following: concepts of reality; the nature of space, time, and relativity; theories of knowledge; the nature of mind; and the meaning of existence. The course is designed to train the student to think philosophically, as well as to acquaint him with data in the field.

PROFESSOR HAVICE

2 semester hour credits

Ps 50 Principles of Psychology

An introductory survey of those methods and findings in psychology which are of practical importance in business and industry. The topics which will be considered include individual differences, personality, motivation, leadership, morale, propaganda.

PROFESSOR ESTES

2 semester hour credits

Thesis

Theses are not required of candidates for the bachelor's degree. Certain students, who have demonstrated marked ability in the field of research, may be permitted to substitute a thesis for one or more courses of the senior year.

By "thesis" is meant an essay involving the statement, analysis, and solution of some problem in pure or applied science. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of each candidate for an engineering degree.

The subject of the thesis is to be decided in conference between the candidate and that faculty member of the professional department to whom he is assigned for supervision in thesis work; final approval, however, resting with the head of the department. The subject may be one of structural design, research, testing, study of a commercial process, etc., but in no case will a mere resumé of prior knowledge and/or discussion of the present state of the matter be acceptable. This, it is true must normally be made, but in addition thereto there must be a certain amount of work planned and executed, aimed towards the extension of the present field of information regarding the subject chosen.

In many cases the student presents an individual thesis. However, in nearly equal number, acceptable subjects will be found necessitating the co-operation of at least two men, either of the same or sometimes of different professional departments. In such cases, each man is primarily responsible for a certain part of the work, while also making himself wholly familiar with the entire problem; and the completed thesis must show clear evidence of the evenly-balanced co-operation and labor of the men concerned.

The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the professional departments interested, and then forwarded to the Secretary of the Day Division; final approval of the thesis resting with the Dean.

Upon acceptance, the thesis becomes the property of the University, together with all apparatus and material used in connection therewith, except that hired or borrowed, or originally the personal property of the candidate. It is not to be printed, published, nor in any other way made public except in such manner as the professional department and the Dean shall jointly approve.

Frequently thesis subjects may be chosen on problems arising in the plant where the student is employed at co-operative work. Employers are usually glad to consult with the student in the selection of the subject and the subsequent development of the thesis.

When theses are conducted in this manner, it is understood that the employer is not expected by the University to assume any expense of the thesis nor to furnish any supplies or equipment to be used in the development of the thesis other than those which he may consider it advisable and desirable to place at the disposal of the students. The regulations governing the use of laboratories and buildings of the co-operating firms will vary in practically all cases and each student must naturally be governed definitely by the regulations existing at the plant where the thesis is to be conducted.

It is understood that the thesis work must not in any way interfere with the regular required co-operative work and must be done during hours distinctly outside of regular co-operative work hours unless special request is made by the co-operating firm for some other arrangement.

Theses conducted in conjunction with co-operating firms must be submitted in duplicate, one copy to be presented by the Dean to the co-operating employer.

For all further information, the candidate for the degree is referred to the "Directions for Theses," which he may obtain from his professional department at the end of his junior year.

NORTHEASTERN UNIVERSITY

*College of Engineering**Courses of Instruction*

1940-1941

(The University reserves the right to withdraw any course in which there is insufficient enrolment.)

Course Number	Course	Semester Hours
CHEMICAL ENGINEERING		
Ch E 1	Flow of Fluids	2
Ch E 2	Ind. Stoichiometry	2
Ch E 3	Unit Operations	3
Ch E 4	Unit Operations	3
Ch E 5	Unit Operations Lab.	1½
Ch E 6	Unit Operations Lab.	1½
Ch E 7	Inorg. Chem. Tech.	2
Ch E 8	Org. Chem. Tech.	2
Ch E 9	Chemical Process Laboratory	3
Ch E 10	Chemical Engineering Projects	4
CHEMISTRY		
Ch 1	General Chemistry	4
Ch 2	Inorganic Chemistry	4
Ch 3	General Chemistry	4
Ch 4	Inorganic Chemistry	4
Ch 9	Qualitative Analysis	3
Ch 11	Qualitative Analysis Laboratory	2½
Ch 14	Quantitative Analysis	2
Ch 17	Quantitative Analysis	2
Ch 16	Quantitative Analysis Laboratory	1½
Ch 19	Quantitative Analysis Laboratory	1
Ch 31	Organic Chemistry	2
Ch 32	Organic Chemistry	2
Ch 33	Organic Chemistry Laboratory I	1
Ch 34	Organic Chemistry Laboratory II	1
Ch 37	Organic Chemistry	2
Ch 39	Organic Chemistry Laboratory	1
Ch 44	Physical Chemistry	2½
Ch 45	Physical Chemistry	3
Ch 46	Physical Chemistry	3
Ch 51	Sources of Information	1
Ch 61	Thermodynamics	2

Courses of Instruction

Course Number	Course	Semester Hours
CIVIL ENGINEERING		
CI 3	Surveying I.....	1½
CI 4	Surveying II.....	2½
CI 5	Surveying I, F. & P.....	1
CI 6	Surveying II, F. & P.....	1
CI 7	Curves and Earthwork I.....	2
CI 8	Curves and Earthwork II.....	2
CI 9	Curves and Earthwork I, F. & P.....	1
CI 10	Curves and Earthwork II, F. & P.....	1
CI 11	Hydraulics.....	2½
CI 12	Hydraulics.....	2
CI 15	Theory of Structures.....	3
CI 16	Theory of Structures.....	3
CI 20	Advanced Surveying.....	2
CI 21	Sanitary Engineering I.....	2
CI 22	Sanitary Engineering II.....	2
CI 23	Engineering Structures.....	3
CI 24	Engineering Structures.....	3
CI 25	Concrete.....	2
CI 26	Concrete.....	2
CI 27	Concrete Design.....	1
CI 28	Concrete Design.....	1
CI 29	Structural Design.....	2
CI 30	Structural Design.....	2
CI 31	Highway Engineering.....	2
CI 32	Highway Engineering.....	2
CO-ORDINATION		
C 7	Engineering Conference.....	½
C 8	Engineering Conference.....	½
Ps 1-A	Orientation Problems.....	0
DRAWING		
D 1	Graphics I.....	3
D 2	Graphics II.....	3
D 3	Engineering Drawing.....	2
D 4	Machine Drawing.....	2
ECONOMICS		
Ec 21	Economics.....	2
Ec 22	Economics.....	2

Courses of Instruction

Course Number	Course	Semester Hours
ELECTRICAL ENGINEERING		
EL 1	Electrical Engineering I.	1
EL 2	Electrical Engineering I.	1
EL 5	Electrical Machinery.	4
EL 6	Electrical Measurements.	2½
EL 9	Electrical Engineering II.	1½
EL 10	Electrical Engineering II.	2
EL 11	Electrical Engineering Laboratory.	1
EL 12	Electrical Engineering Laboratory.	1
EL 13	Electrical Measurements I.	2½
EL 14	Electrical Measurements II.	2
EL 17	Electrical Engineering III.	2
EL 18	Electrical Engineering III.	2
EL 19	Electrical Testing Laboratory.	2
EL 20	Electrical Testing Laboratory.	2
EL 21	Electrophysics.	1
EL 22	Electrophysics.	2
EL 23	Electrical Measurements Laboratory.	2
EL 24	Advanced Measurements Laboratory.	2
EL 25	Electrical Engineering IV.	3
EL 26	Electrical Engineering IV.	3
EL 27	Advanced Electrical Engineering Lab. .	2
EL 28	Advanced Electrical Engineering Lab. .	2
EL 29	Electrical Engineering V-A.	2½
EL 30	Electrical Engineering V-A.	2½
EL 31	Electrical Engineering V-B.	2½
EL 32	Electrical Engineering V-B.	2½
EL 33	Advanced Experimental Investigations	2
EL 34	Advanced Experimental Investigations	2
ENGLISH		
E 1	English I.	3
E 2	English I.	3
GEOLOGY		
Gy 1	General Geology.	2
Gy 2	General Geology.	2
INDUSTRIAL ENGINEERING		
IN 3	Production Processes I.	2½
IN 4	Production Processes II.	1½
IN 5	Industrial Management I.	2
IN 6	Industrial Management II.	2
IN 7	Industrial Accounting.	2
IN 8	Industrial Accounting.	2

Courses of Instruction

Course Number	Course	Semester Hours
INDUSTRIAL ENGINEERING (Cont.)		
IN 9	Cost Accounting.....	2½
IN 10	Cost Accounting.....	2½
IN 11	Methods Engineering.....	2½
IN 14	Industrial Finance.....	2½
IN 15	Sales Engineering.....	2½
IN 16	Personnel Administration.....	2
IN 18	Sales Engineering Problems.....	2½
IN 21	Contracts.....	2
IN 23	Industrial Statistics.....	2½
IN 24	Industrial Statistics.....	2½
IN 25	Industrial Plants.....	2½
IN 26	Industrial Plants.....	2½
LIBERAL ELECTIVES		
B 50	General Biology.....	4
E 50	Shakespeare.....	2
E 51	The Modern Novel.....	2
GA 51	History of Architecture.....	2
Gv 51	American Constitutional Law.....	2
Gy 50	Geology.....	2
M 50	History of Mathematics.....	2
Ph 50	Introduction to Philosophy.....	2
Ps 50	Principles of Psychology.....	2
MATHEMATICS		
M 1	College Algebra.....	3
M 3	Trigonometry.....	2
M 4	Analytic Geometry and Introduction to Calculus.....	5
M 5	Differential Calculus.....	3
M 6	Integral Calculus.....	3
M 7	Differential Equations.....	2½
MECHANICAL ENGINEERING		
ME 1	Mechanism.....	3
ME 15	Industrial Plants.....	2½
ME 16	Industrial Plants.....	2½
ME 20	Applied Mechanics (Statics).....	3
ME 21	Applied Mechanics (Kinetics).....	3
ME 22	Strength of Materials.....	3
ME 23	Strength of Materials.....	2
ME 24	Advanced Mechanics.....	2
ME 27	Metallography.....	2
ME 29	Heat Engineering (Power Plant Equip- ment).....	2

Courses of Instruction

Course Number	Course	Semester Hours
MECHANICAL ENGINEERING (Cont.)		
ME 30	Heat Engineering (Thermodynamics) ..	3
ME 31	Heat Engineering	2½
ME 32	Heat Engineering	2½
ME 33	Refrigeration	2
ME 34	Steam Turbines	2
ME 35	Heat Engineering	2
ME 36	Heat Engineering	2½
ME 37	Diesel Engines	2
ME 38	Diesel Laboratory	2
ME 39	Engine Dynamics	2½
ME 40	Aerodynamics	2
ME 42	Heating and Air Conditioning	2
ME 44	Power Plant Engineering	2½
ME 45	Air Conditioning Design I	2½
ME 46	Air Conditioning Design II	2½
ME 48	Air Conditioning Laboratory	2
ME 51	Machine Design	3
ME 52	Machine Design	3
ME 54	Diesel Engine Design	2½
ME 61	Mechanical Engineering Laboratory ..	2
ME 62	Mechanical Engineering Laboratory ..	2
ME 63	Mechanical Engineering Laboratory ..	2½
ME 69	Testing Materials Laboratory	1½
ME 70	Testing Materials Laboratory	1½
ME 73	Aircraft Structures	2
ME 74	Aeronautical Laboratory	2
ME 76	Aircraft Engine Design	2½
PHYSICAL EDUCATION		
PE 2	Hygiene	1
PE 3	Physical Training	0
PE 4	Physical Training	0
PHYSICS		
P 1	Physics I	3
P 2	Physics I	3
P 3	Physics II	2
P 4	Physics II	2
P 5	Physics Laboratory	1
P 6	Physics Laboratory	1
P 7	Physics Laboratory	2
P 8	Physics Laboratory	2
SOCIOLOGY		
S 1	Introduction to Sociology	2
S 2	Principles of Sociology	2

Laboratory Equipment

Field Instruments of Civil Engineering

THE Department of Civil Engineering is provided with a variety of excellent equipment for field work. The instruments have been chosen to make possible the working out of advanced as well as elementary field problems, and to acquaint the student with the principal makes and types of instruments in general use.

For compass work there are seven compasses and an assortment of steel and wood range poles. Probably no better location could be found for demonstrating to students the phenomenon of local attraction than the immediate vicinity of the University. For measuring angles and elementary traverse work, the following equipment is available:

- 2 Keuffel and Esser one minute transits
- 5 Buff and Buff one minute transits
- 2 Berger one minute transits
- 2 Wissler one minute transits
- 1 Gurley one minute transit
- 1 Poole one minute transit
- 1 Hutchinson one minute transit

For elementary differential leveling or profile leveling the following instruments are available:

- 2 Keuffel and Esser levels
- 3 Berger levels
- 3 Buff and Buff levels

Both Wye and Dumpy levels are included among these.

For instruction in surveying, the College also possesses a sufficient number of steel tapes, metallic tapes, range poles, and Philadelphia level rods to equip completely all of the field parties in the various surveying courses at the same time. Some of these field parties can be supplied with Lenk tape rods or with Boston rods.

Traverses run in the course in Surveying I are required to conform with the quality of workmanship set forth by the Massachusetts Land Court "Class A" regulations. The following equipment is reserved for such work and for thesis preparation:

- 2 Berger 30 second transits
- 2 Buff and Buff 30 second transits
- 1 Berger one minute transit
- 1 Buff and Buff one minute transit

All of these transits are nearly the same, having $6\frac{1}{4}$ " horizontal circles equipped with full vertical arcs. For measuring horizontal distances the field parties are fully equipped with Lufkin (instantaneous) No. 236D tapes. These tapes are compared and carefully checked with the Invar tape before being used.

For topographical work there are available seven plane table outfits: 2 Buff and Buff, 2 Gurley, 2 Keuffel and Esser, and 1 Berger. All of the transits in the Civil Engineering Department are equipped with stadia hairs. In both the plane table and stadia surveying the College is equipped to send out either stadia rods or Philadelphia level rods.

For hydrographic surveying there is a Gurley electric current meter with the necessary rods and recording apparatus for making stream flow observations. A sextant is available for measuring angles in connection with hydrographic surveying.

Triangulation Station

The College of Engineering has set on the roof of the East Building a triangulation station known as "Station Northeastern," which is established as part of the regular course from Massachusetts triangulation Stations State House and Mt. Auburn. The latitude and longitude of this station have been accurately checked in a thesis run from important triangulation points in eastern Massachusetts. A tripod signal can be erected on "Station Northeastern." Other triangulation stations located on such hills as Corey Hill and Parker Hill are available for use of Northeastern students. For measuring the angles of a triangulation scheme the department possesses a 20 second precise Buff and Buff triangulation transit and a Berger 10 second repeating theodolite. An Invar steel tape manufactured by Société Genevoise d'Instruments de Physique, which has been calibrated and checked by the Bureau of Standards, is used for base line measurements and for checking the steel tapes.

Levels and Level Rods

For ordinary precise work such as is done in the average city or town for bench mark control, the following equipment is available: a Bausch & Lomb precise level and a Berger precise engineer's level. The College is also equipped for doing barometric leveling, for which it has an aneroid barometer manufactured by Reynolds of England. For accurate checking of these bench marks and comparing them with the United States geodetic work and for comparing bench marks with those found in various cities and towns with the Boston Base and the U. S. Geodetic Base, there are a Buff and Buff Coast and Geodetic level and a Gurley Coast and Geodetic level rod.

For solar observations a Berger 1 C 30 second transit equipped with prismatic lens and a Berger solar attachment is used. Two of the 30 second transits are equipped with 45° mirrors in the sun shades and full vertical arcs for making Polaris observations.

Demonstration Models

The Department of Civil Engineering has had constructed a number of brass and wooden models of typical engineering structures. The following are kept conveniently at hand for classroom demonstrations.

1.

Floor Beam Connection to Girder — Through Girder Railway Bridge. Model one-third size. (Shows also typical knee brace connection to floor beam and girder as well as lateral bracing in plane of bottom flange.) Model is constructed of white wood with rubber-headed nails for rivets.

2.

Bottom Chord Joint Detail (L_2) of a 150' Span Single Track Through Steel Railway Bridge of the Warren Type. Model is of white pine and one-quarter size.

3.

Top Chord Joint Detail (U_2) of a 150' Span Single Track Through Steel Railway Bridge of the Warren Type. Model is of white pine, one-quarter size, and shows lateral and sway bracing.

4.

Hip Joint Detail (U_1) of 150' Span Single Track Through Steel Railway Bridge of the Warren Type. Model is one-third size and white pine. It shows a typical example of portal bracing.

5.

Complete Model of 80' Span Single Track Through Girder Bridge. Model is an exact reproduction, one-sixteenth size, using brass plates and angles of uniform thickness (0.040") and riveted together with 1-16" diameter copper rivets.

The bridge is reproduced from a complete design previously made and including web and flange splices.

Hydraulics and Sanitary Engineering Laboratory

Laboratories of the Civil Engineering Department include much demonstration equipment for use in connection with courses in hydraulics. A standard circular sharp-edged orifice and a Venturi meter, each equipped with appropriate manometers, permit the study of flow through pipe lines. For measuring flow in channels there are two weirs, one a suppressed rectangular weir with a

fixed crest and the second equipped with removable plates providing either a V notch, a contracted rectangular, or a parabolic weir.

A tank equipped with standard circular orifice, standard short tube, or re-entering tube, has been installed for the purpose of demonstrating the measurement of flow discharging into the atmosphere. Water is circulated about the laboratory by means of a direct connected centrifugal pump. Platform scales and a weighing tank are available to check the results obtained in the demonstrations outlined above.

The following Weather Bureau apparatus has been installed in the laboratory for purposes of research in problems in sanitary engineering: standard thermometer, maximum-minimum thermometer, sling psychrometer, standard snow and rain gage, recording hygrothermograph, station barometer, and an electric tipping bucket rain gage recorder.

The Sanitary Research Laboratory is designed to be used for research by the faculty and senior Civil Engineering students in connection with thesis problems, and for demonstrations of methods of sanitary analysis to students taking courses CI 21 and CI 22. The laboratory is equipped with tables, sink, glassware, chemical apparatus, chemicals, balances, microscope, drying oven, water bath, muffle furnace, $37\frac{1}{2}^{\circ}\text{C}$. incubator, gas analysis apparatus, and other necessary equipment so that a complete analysis of either water or sewage may be made in accordance with the procedure outlined by "Standard Methods of Water Analysis" published by the American Public Health Association.

Mechanical Engineering Laboratories

The Mechanical Engineering Department has a suite of well equipped laboratories, containing a large variety of modern machines run by steam, gasoline, water, and electricity, and occupying over 10,000 square feet of floor space in the basement of the West Building.

The laboratory is provided with a canal of 14,000 gallons capacity which serves the various pumps, weir boxes, and condensers. Special areas have been set aside and equipped for oil testing, concrete mixing, mechanics research, and similar purposes.

Steam Apparatus

Steam is supplied to the laboratory directly from the steam mains of the Boston Edison Company, or from the auxiliary power plant operated by the University and the Boston Y.M.C.A. A Uniflow steam engine of fifty horsepower capacity and of the latest design is so equipped that a complete engine test may be run on the machine. The auxiliary apparatus connected with

the engine includes a prony brake for measuring the output of the machine while a surface condenser is tied in with the exhaust line in order to obtain the steam consumption.

A Chicago steam-driven air compressor is arranged to make complete tests on both the steam and air ends of the machine. This compressor is also connected to a surface condenser.

A Warren direct-acting steam pump is connected up to run a standard pump test, the steam end being tied in with a surface condenser and the water end with a rectangular weir for measuring the quantity of water delivered by the pump.

A twelve horsepower Curtis steam turbine of the impulse single-stage type, to which is directly connected an absorption dynamometer or water brake, is available for testing. The steam end of this turbine is piped to a Worthington surface condenser and also to a Schutt-Koerting ejector condenser.

A small Sturtevant horizontal steam engine is equipped for a complete test with a prony brake for the measurement of power output.

Other steam-driven apparatus includes a steam pulsometer pump, a steam injector, two small vertical steam engines for valve setting experiments, a heat exchanger for determining heat transfer between steam and water, and a lee steam turbine of twelve horsepower rating driving a two-stage centrifugal pump.

Apparatus is also set up for experiments on the flow of steam through an orifice and for the determination of moisture content in steam through the use of throttling and separating steam calorimeters.

Power Plant

The auxiliary steam power plant is also used for testing purposes. The plant is equipped with the necessary tanks and scales for weighing the feed-water, steam pressure gages, scales for weighing coal and ashes, draft recorders, Orsat apparatus, CO₂ recorder, electrical meters, thermometers, steam engine indicators, and other equipment necessary for complete power plant tests. The plant consists of four horizontal return tubular boilers, each of 1,711 square feet of heating surface. Two of these boilers are equipped for burning coal and two for burning fuel oil. There are the various auxiliary appliances, such as feed-water pumps, feed-water heater, fuel oil pumps and heaters, automatic damper regulator, and steam and oil separators. The steam line of the Mechanical Laboratory is connected to a Foxboro recording steam flow meter, while in the boiler feed-water line is located a water meter of the Buffalo make.

In the Engine Room are located four three-wire direct current generators, three of which are driven by Ridgeway reciprocating steam engines while the fourth generator is direct-connected to a Westinghouse-Parsons steam turbine.

Hydraulic Equipment

The hydraulic equipment in the laboratory includes a two-stage centrifugal pump with a dual drive or separate drive as may be desired. The drive is either direct from a fifteen horsepower direct current motor or else direct from a Lee single-stage steam turbine.

A six-stage centrifugal pump direct-connected to a forty horsepower direct current motor has been installed for testing purposes. The motor, through a speed regulator, has a range in speed from 900 R.P.M. to 2200 R.P.M. The pump is rated at 180 G.P.M. against a head of 450 feet. The capacity of the pump is measured by a Venturi tube of the latest design. There is also a rotary pump driven direct by an electric motor.

Other machines for hydraulic experiments are a triplex power pump, driven by a three horsepower electric motor, a hydraulic turbine of the Pelton Wheel type, a small single-stage centrifugal pump driven directly by a $\frac{3}{4}$ horsepower gasoline engine, a triangular and a rectangular weir for measuring quantities of water discharged by the various pumps in the laboratory, besides the necessary tanks, platform scales, and hook gages.

Internal Combustion Engines

Under the internal combustion laboratory equipment may be listed a Fairbanks-Morse ten horsepower gasoline and oil engine, so arranged that tests may be run with various kinds of fuels, and complete test data obtained; a Plymouth automobile engine arranged to run tests with different fuels and carburetors; and two gasoline airplane engines for demonstration purposes.

Several Diesel engines of various types have been installed, including a 30 H.P. high speed Fairbanks-Morse machine of the solid injection type which drives a 19 K.W., D.C. Generator, and two small engines for dismantling and demonstration purposes.

Refrigeration, Heating, and Air Conditioning

The refrigeration equipment includes a $\frac{3}{4}$ ton Frick ammonia refrigerating machine equipped with a double pipe condenser, ammonia weighing tanks, and a specially designed indicator. A Triumph compressor is also available for demonstration work. Apparatus for the determination of heat transference through various substances is available.

A constant temperature room is equipped with apparatus for either heating or cooling. Additional equipment consists of a warm air pressure system with Timken oil burner equipment and complete automatic controls, a Fedders type unit heater, and oil burning equipment and controls for demonstration purposes.

For fan testing, a multi-blade blower of Sturtevant manufacture driven by an electric motor is set up for running different tests with varying capacity.

A Carrier air conditioner, motor driven and equipped with automatic humidity control, is arranged for testing.

Testing Materials and Heat Treatment Equipment

The testing materials equipment includes a Riehle 300,000 lb. capacity Model P4 Precision Hydraulic Universal Testing Machine of the latest type and equipped with all necessary accessories, a 50,000 pound Olsen Universal Testing Machine equipped for tension, compression, transverse bending, and shearing tests; a 2,000 pound automatic shot cement tester equipped with transverse tools; a 10,000 inch pound Riehle torsional testing machine; a 220 foot pound Riehle impact tester for Charpy Izod or tension tests; a White-Souther motor driven fatigue tester holding two specimens at one time; and a Ro-Tap sieve shaker with time switch and sieves for mechanical analysis of aggregate. Among the measuring instruments are Brinell and Olsen-Firth hardness testers; extensometers for tension, column, and beam tests; and a torsion meter.

For heat treatment, an electric furnace and a Stewart triple-purpose gas-fired furnace are available with pyrometers for temperature measurements.

For studying the effects of heat treatment, a large metallographic outfit of Bausch & Lomb make is used. This apparatus makes possible a magnification of from 125 to 2,600 diameters for inspection and taking photographs of crystalline structures of metals. Equipment is available for polishing and etching specimens in preparation for examination of the crystalline structure of the metal being studied.

Polaroid equipment for photo-elastic stress analysis is also available.

Miscellaneous Equipment

In addition to the apparatus mentioned above, the oil testing equipment includes a Saybolt Universal viscosimeter for viscosity determination, a Cleveland open cup tester for determining the flash point and fire point of different grades of oil, a Conradson carbon residue apparatus, a steam emulsion apparatus, a water power centrifuge, a cloud and pour test apparatus, a Union oil colorimeter for color number determination, and a Thurston friction oil tester for determining the durability and lubricating properties of oils.

An Emerson fuel calorimeter is used for finding the calorific content of solid and liquid fuels, and a Junkers gas calorimeter is available for determining the heat content of gaseous fuels. For calibrating gages, two dead weight gage testers of 200 pounds and 500 pounds capacity are used for pressure gages, while for vacuum gages a water aspirator and a motor driven vacuum pump are available.

For measuring the flow of water in pipe lines, a Pitot tube, orifice, Venturi meter, and water meter are located in a pipe line for testing.

Apparatus for measuring flow of air includes a Pitot tube, an orifice, and an anemometer, besides the necessary draft gages.

Apparatus for measuring flow of steam consists of a calibrated orifice and a steam flow meter. A recording steam pressure gage is also available.

An experiment on "Friction of Drives" includes apparatus consisting of three pulleys of different materials with three different kinds of belts, which make possible nine tests with various combinations.

A motor-driven vacuum pump with a rated capacity of six cubic feet of free air per minute under $29\frac{1}{2}$ inches of mercury vacuum is available for tests.

Included among the measuring instruments are five steam engine indicators, two internal combustion engine indicators, four hand tachometers (centrifugal type) with three speed ranges from 0 to 4000 R.P.M., one tachograph, one tachoscope, one roscope for speed and vibration determinations, one recording thermometer, planimeters, revolution counters, thermometers, pressure gages, and a portable strobotac.

Machine Shop

Adjoining the laboratory is a machine shop used for maintenance purposes and for thesis work. The machines available are a sixteen-inch motor-driven South Bend engine lathe, two belt-driven engine lathes, a vertical drill press, a small vertical drill, a horizontal milling machine, a shaper, a power hack saw, a motor driven double emery wheel, an arbor press, two nine-inch South Bend Workshop lathes, an Eisler spot welding machine, a 200 ampere Lincoln arc welding outfit, and an Oxweld acetylene welding outfit. There are also an anvil and a small hand forge for forging purposes.

Electrical Engineering Laboratories

The basement of the South Building is given over to electrical laboratories, which are of three types: the dynamo laboratory, the measurements laboratory, and the high tension laboratory.

Dynamo Laboratory

This laboratory is equipped with sixty generators and motors of different types, the size and voltage ratings being selected to reduce as much as possible the risk from high voltage apparatus while making available to the student commercial apparatus such that the various quantities it is desired to measure will be of reasonable dimensions.

Machines from five to twenty-five kilowatt capacity are used principally for this reason, but also because the student in his engineering practice early comes in contact with large and varied machinery in power houses and electrical plants.

D. C. Machinery

For D. C. work there are two sets of individually driven specially matched direct current six-kilowatt, 125-volt compound generators, which will work as shunt machines. A large 230-volt, 12 H.P., 200 R.P.M. Sturtevant motor is used for retardation tests, and an assortment of series, shunt, and compound motors each fitted with brake pulleys, are used for routine motor testing.

A. C. Machinery

For A. C. work there are a fifteen-kilowatt (unity p.f.) three-phase, 240-volt sixty cycle alternator and a 7.5 kilowatt G. E. machine with special armature taps so that it may be used as a single-phase, two-phase, three-phase, or six-phase synchronous motor.

There are also two 12.5 kilowatt (eighty per cent, p.f.) G. E. machines having each armature coil tapped out separately and giving various phase arrangements; a five-kilowatt Holtzer Cabot machine with three rotors, making it available as either a squirrel cage, wound rotor, or synchronous machine; a G. E. single-phase clutch motor; a type R. I. induction motor; a Wagner single-phase motor; two Wagner motors arranged for concatenation control; one five-kilowatt Holtzer three-phase synchronous converter; a Westinghouse 7.5-kilowatt two-phase motor; a ten horsepower Fynn-Weichsel Unity power factor motor; and a Westinghouse Synchronous Converter (10 kilowatt, 240 D. C. volts; one, three, and six phase, sixty cycles).

Recently installed in this laboratory is a General Electric Electrodynamometer of 15 horsepower capacity, 2000 to 4000 R.P.M., direct connected on one end to a 10 horsepower, 3 phase, wound rotor induction motor. By means of external resistance control this motor may have its speed reduced to 50% of its rated value and still carry its rated torque. The shaft extension on the other side of the dynamometer can be used for testing other electrical equipment of appropriate size, such as D. C. motors, single phase machinery, etc. A starting and loading panel, including latest types of automatic control equipment, has been installed with the electrodynamometer.

Another recent addition is a 12.5 K. W. Steel Tank Mercury Arc Rectifier arranged for double three-phase operation. Starting panel, all necessary pumping equipment, McLeod vacuum gage, and a special phase shifting device for controlling the output are included with this unit.

Auxiliary Equipment

For transformers there are six single-phase G. E. type H units wound for 550 volts and 220-110 volts; a set of transformers with Scott connection taps; and a Type R.O. constant current transformer, primary winding for 220-190 volts and secondary for 6.6 amperes, 310 volts maximum fitted with a load of eighty candle power 6.6-amperes, sixty-watt nitrogen filled tungsten lamps; and a pair of 550-220 110 volts G. E. three-phase transformers of 5-kva capacity. There is also a full equipment of necessary control and regulating appliances and twelve movable test tables fitted with the necessary terminals, switches, circuit breakers, etc., for setting up the various combinations required from time to time. Each student when performing an experiment does the complete wiring, no apparatus in the laboratory being permanently wired up except as to its normal, self-contained circuits.

Power is supplied over a special set of feeders from the Boston Edison system. Two power circuits are available: one of 50 K.W. capacity supplying 60 cycle, three phase, alternating current at 230 volts and the other providing 115-230 volt three wire direct current. For lowering the voltage in transformer testing G. E. induction regulators are used.

There are also speed governors and Tirrel regulators, both A. C. and D. C., capable of being used with any special machines found desirable at any particular time. An Edgerton Stroboscope and a two element G. E. Oscillograph with camera attachments have recently been added to the laboratory equipment.

High Tension Laboratory

For high tension work there have been installed a pair of General Electric transformers of 4 kva capacity giving 50 kilovolts. A special room in the laboratory has been equipped for cable and insulation testing. The auxiliary equipment includes the necessary sphere gaps, induction regulators, calibrated voltmeters, etc., the transformers being supplied from a special motor-driven generator. The set has been supplied with the necessary kenotron tubes and controls for the rectification of the high potential alternating current for direct current working.

Impulse testing of insulation is made possible by a surge generator capable of producing waves having crest values up to 100 kilovolts. This apparatus is complete with all necessary equipment, including a Plydonograph, for the study of Lichtenberg figures.

A 4000 ampere, low voltage transformer with regulator for current control is available for the study of the effects of heavy currents in conductors, switches, and contacts.

Electrical Measurements Laboratory

This laboratory is equipped with apparatus of two distinct types: first, that planned fundamentally for teaching the principles

of measurements and, second, that which is used in teaching advanced standardizing methods as well as for keeping the instruments in daily use in the other laboratories properly calibrated.

It is supplied with a set of small storage cells for calibration work and a set of twelve 500-ampere-hour cells for current work.

The apparatus utilized in the first type of work includes the customary devices used for resistance, potential, energy, and magnetic measurements, such as slide wire and Wheatstone bridges, Poggendorf's E.M.F. comparison, D. C. watt hour meter calibrations, magnetic comparitor, etc.

The second type of work uses the following Leeds and Northrup equipment: Precision Kelvin Double, Carey Foster, and Wheatstone Bridges; two type K potentiometers with auxiliary apparatus of volt boxes, standard cells, standard shunts of 10 and 100 ampere capacity, a set of resistance standards of the N.B.S. type and another of the Riechsanstalt patterns, a complete set of Inductance and Capacity Standards. For secondary standards of voltage and current the laboratory is equipped with Weston Electrical Instrument Corporation instruments with the necessary transformers.

Other equipment includes a Westinghouse three-element oscillograph with full equipment; a phase shifter, G. E. rotating standard; and numerous types of A. C. watt hour meters. In the field of electronics and communication the following General Radio equipment is used: audio frequency meter; precision wave meter; low frequency oscillator (25-70,000 cycles); intermediate frequency oscillator; capacity, inductance, universal, radio frequency, and vacuum tube bridges; two electron oscillographs with Bedell sweep circuits with special auxiliary equipment; Edgerton Stroboscope; and a variety of wave filters of the low, high, and band pass types. The laboratory is equipped with a Leeds and Northrup Vreeland oscillator; a G. E. vacuum tube voltmeter; and a "Comet-Pro" superheterodyne receiver for radio frequency bridge balancing.

Several recent additions are a General Radio standard signal generator, type 605 A, having carrier frequency range from 9.5 kilocycles to 50 megacycles, with continuously adjustable voltage output from .5 microvolt to .1 volt, and capable of being modulated by a 400 cycle signal from 0 to 50%; a General Radio beat frequency oscillator, type 713 A, variable to one cycle within a range of from 10 to 20,000 cycles; and a class 21 H Standard Frequency Assembly for exact time and frequency measurements. A Western Electric 6 A transmission measuring set; and two 387 A microphones, with amplifier and auxiliary equipment for sound measurements; one 13 A oscillator, four 44 A-1 repeaters and one 11 A radio receiver are also available.

The following equipment has been constructed by the department: an attenuator; an A. C. and D. C. artificial telephone line; a

beat frequency oscillator; a multi-element electrically driven contactor and electronically operated switch for use with cathode ray oscillograph; magnetostriction and Quartz crystal oscillators; a multi-vibrator and numerous amplifiers, power packs, oscillators, vacuum tube voltmeters, etc.

Briefly, the laboratory is equipped for practically any work in electrical measurements outside of the absolute determinations as carried on in national standardizing laboratories.

Instrument Room

The Instrument Room is supplied with 80 high grade General Electric Company and Weston Electric Instrument Corporation alternating current voltmeters and ammeters, with a number of potential and current transformers, and with three polyphase and sixteen single-phase indicating wattmeters, each of double current and double voltage ranges.

For direct current working there are 65 voltmeters (of triple range), ammeters, and millivoltmeters of the above makes. There are twenty-five standard shunts of ranges from 10 to 100 amperes with uniform drops of fifty millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, non-inductive loading resistance, air core loading reactances, frequency indicators, power factor indicators, etc.

The department also has a small shop for maintenance purposes, a dark room, and several well appointed research areas for the use of staff members and for seniors engaged in thesis work.

Chemical Engineering Laboratories

The Chemical Engineering Department has under its supervision the *Chemical Engineering Laboratory*, which is primarily devoted to equipment for studying the various unit operations, and the *Industrial Chemical Laboratory*, which houses equipment suitable for investigating manufacturing processes and testing industrial chemical products.

Chemical Engineering Laboratory

Flow of Fluids.—Extensive equipment is available for the study of characteristics of the flow of gases and liquids. The orifice, Venturi meter, Pitot tube, anemometer, Thomas meter, gas meter, rotameter, slot weir, draft gage, and multiplying gage are typical of the equipment used in determining the rate of flow. Special fluid systems have been designed and constructed for studying the type of flow and friction.

Heat Transfer.—Condensers, double pipe heat exchangers, steam-jacketed kettles, insulation testing equipment, the gas furnace, and pyrometers serve to make clear the principles of heat flow.

Distillation.—For the study of batch and continuous distillation a forty-eight gallon still provided with a fifteen-plate bubbler cap column, condenser, and tanks, is available. This unit can be operated under partial vacuum if desired. When it is operated as a continuous still, a preheater for the feed is used. The apparatus is designed so that samples can easily be taken at various points in the system.

Evaporation.—Studies are made of the effect of vacuum on the boiling point of various solutions. A steam-jacketed kettle is available for determining the rate of heat transfer from steam to boiling solutions.

Absorption.—A bubble cap column and small packed columns make possible studies concerning the fundamentals of liquid-vapor reactions.

Drying and Air Conditioning.—A Carrier processing cabinet equipped with automatic temperature and humidity control enables the student to determine the effect of temperature and humidity, and air velocity on the rate of drying. The drying characteristics of some substances are noted by running tests on a Stokes vacuum shelf dryer and on steam heated drying rolls. The Carrier processing cabinet is also available for observing the effect of temperature and humidity on various industrial products.

Filtration.—The present equipment consists of a Shriver 6-inch plate and frame press, a Sweetland pressure filter, a rotary vacuum filter, and special high pressure oil filtration equipment.

Separation.—Mechanical separation is studied by means of a Rotex screen, a Federal air classifier, a Fletcher centrifuge, and specially constructed hydraulic classifying equipment.

Crushing and Grinding.—A jaw crusher, a ball mill, Sturtevant crushing rolls, and a Rotap sieve shaker complete the equipment for the study of crushing and grinding.

General Equipment.—In addition to special equipment noted, the laboratory is equipped with tanks, blowers, steam traps, mixers, scales, pumps, and other accessories necessary to supplement the above equipment and to build special units.

Industrial Chemistry Laboratory

This laboratory is used mostly for process development and research. It is equipped with high pressure steam, compressed air,

vacuum, and other facilities usually found in a chemical laboratory. Some of the equipment available for use in this laboratory are a Premier Colloid mill, a Freas electric oven, a high temperature gas oven operated by a centrifugal blower, a Vorce chlorine cell, a Carver electrically heated hydraulic press, a Holtzer-Cabot 10 volt-200 ampere motor generator unit, and a Hobart mixer. A variety of industrial chemicals and small apparatus are kept on hand for use in trying out old and developing new industrial processes.

Industrial Engineering Equipment and Laboratories

Students in the Department of Industrial Engineering share in the use of the Mechanical Engineering Laboratories, and, in addition, have available for laboratory work in accounting and statistical methods all of the commonly used office machines. These are in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps.

The laboratory is in charge of an assistant instructor whose work is to maintain the equipment in excellent condition and to give instruction in the use of the various office machines.

Principal pieces of equipment in the laboratory include duplicators, typewriters, hand and electric calculators, and both hand and electric adding machines.

For Methods Engineering (motion and time study work) the Department has a laboratory devoted exclusively to this work. The laboratory is completely equipped with the latest facilities and tools used by methods engineers.

The general equipment of the laboratory consists of stationary work benches, equipped for building jigs, fixtures, etc., including a bench lathe and lathe tools; two special combination work and projection tables; a camera table with an elevator top; three small projector tables; two Therblig drawing tables; a circular work bench fitted with trays, clock rack, interchangeable work areas, and a drop delivery chute; a special measuring table; three Sit-Rite chairs; and complete sets of economist assembly racks of various sizes.

For time study work the laboratory has numerous time study boards, decimal stop watches, hour decimal watches, and split second timers.

For micromotion work the laboratory has complete motion picture equipment including camera with special lenses, tripod, special lighting equipment, photometer, splicer, film viewer, etc., together with projectors, hooded screens, and a large wall screen. These are used in conjunction with a Telechron microchronometer and a special microchronometer with interchangeable dials.

To illustrate lectures in the laboratory there are numerous special charts, diagrams, and other instructional material.

Chemistry Laboratories and Equipment

The Hayden Memorial Laboratories

The Chemical Laboratories, located on the fourth floor of the West Building and embodying the most recent developments in materials and design, were given to the University by the Charles Hayden Memorial Fund. The laboratories are adequately equipped for undergraduate instruction in the major branches of chemistry and consist of the following units: (1) General Chemistry and Qualitative Analysis Laboratory, (2) Organic Chemistry Laboratory, (3) Quantitative Analysis and Physical Chemistry Laboratory, (4) Research Laboratories, (5) Dark Room for Photography, and (6) Service Rooms.

General Chemistry and Qualitative Analysis Laboratory

This large and well-lighted laboratory is fully equipped for giving instruction in these undergraduate courses. A hydrogen sulfide room, a well-equipped balance room, a coat closet, and a conference room are a part of this unit.

The laboratory tables are made of light oak and have alberene stone tops. The usual services including water, gas, A.C. and D.C. electricity, and steam are available to the students. The large and well-illuminated fume hoods are of the open front construction type with a special built-in drying cabinet in the base. This cabinet is so constructed that a draft of filtered air is drawn in through screened holes at the base and then passes into the fume exhaust. The hoods are supplied with water, gas, steam, steam cones, 110 V. A.C., 115-230 V. D.C., and also variable D.C. supplied by a battery system.

Organic Chemistry Laboratory

This laboratory is adequately equipped for undergraduate courses in preparation of organic compounds and qualitative organic analysis. The laboratory furniture is made of light oak with alberene stone tops and so arranged that each student has a working space of about six feet. A sink and steam cone are available for each student as well as water, steam, gas, and electricity.

Eight large fume hoods, made of Sheldine stone with leadclad steel bases, enable the student to work in a clean atmosphere. The hoods are well illuminated and contain the same services as the assigned table units. The bases of the hoods serve as drying cabinets and are well insulated to make working conditions at the hood more comfortable.

A large evaporator unit made of alberene stone with ceramic baths, stainless steel tops, and concentric rings facilitates evaporation operations. Provision is made for twenty-seven simultaneous

evaporations, arranged in three tiers of nine units. The source of heat is steam. A special overhead glass plate provides for the draining away of overhead condensate to prevent contamination of the solutions being evaporated.

A multiple-unit organic combustion furnace, an ice storage chamber, an ice-crusher, cork presses, a Fisher micro-melting point apparatus, a saccharimeter, and other accessories needed in these courses are available.

Quantitative Analysis and Physical Chemistry Laboratory

The laboratory tables and fume hoods are similar to those in the Organic Chemistry Laboratory. Abundant drying cabinet space is available in the hood bases. A large evaporator unit, similar to that in the Organic Chemistry Laboratory, and a sand bath built into one of the hoods provide ample space for evaporations. A large Freas drying oven is available for the drying of analytical samples. The balance room is of modern design and well illuminated by indirect lighting.

A small laboratory, adjacent to the Quantitative Analysis Laboratory, is used for technical analyses such as the determinations of coals, vegetable oils, lubricating oils, gasolines, dairy products, textiles, rubber, and other industrial materials.

Some of the equipment available for this type of work includes the following: a standard A.S.T.M. gasoline distillation apparatus, a closed cup and an open cup flash and fire point apparatus, a Conradson carbon residue apparatus, a muffle furnace, an Abbe refractometer, a three objective B. & L. microscope with an oil-immersion objective, a Kjeldahl distillation outfit, a combustion furnace for iron and steel determinations, rheostats, voltmeters, ammeters, etc. This technical analysis laboratory has a fume hood and several working tables with all the necessary services such as water, gas, steam, vacuum, 110 V. A.C., 115-230 V. D.C., and several variable D.C. circuits supplied from a series of batteries through a distribution panel.

A special laboratory is available for electrolytic work such as potentiometric determinations, electrometric titrations, electrolytic analyses of metals, etc. For this work the equipment includes two L. and N. student potentiometers, a Wilkens-Anderson electrolytic machine, and all the accessories necessary.

The electric current distribution panel, specially designed at the University and constructed by the Holtzer-Cabot Company, is located in this electrolytic laboratory. The current available for distribution at this panel is variable D.C. (2-32 V.) and 115-230 V. D.C. A built-in tungar charger enables the batteries to be kept fully charged at all times. The battery system is located in a separate battery room adjacent to the electrolytic laboratory.

The Physical Chemistry Laboratory contains working benches equipped with water, gas, and electricity. A special table containing a thermostat and having D.C. and A.C. connections is used for experiments requiring these services. Apparatus is available for performing experiments on the properties of gases and liquids, thermochemical measurements, and conductivity of solutions. A supply of electrical instruments and special thermometers enables a wide range of special tests to be made as directed.

Research Laboratories

The Chemistry Department has three research laboratories equipped with A.C. and D.C., water, gas, and steam. In one laboratory work can be done on the electrical properties of solutions, solubility effect, and other physical chemistry phenomena. Another laboratory is equipped for work in organic chemistry, and the third can be used for research in analytical or physical chemistry. Electrical instruments and glass apparatus of various types are available for use in the laboratories.

Dark Room Equipment

The photographic dark room is equipped with all the common accessories necessary in photography. A copying camera is available and is especially useful in the making of lantern slides for instructional purposes. An Ellwood enlarger taking a negative as large as 5 x 7 inches, siphon print washers, and several safe lights with interchangeable green, amber, and red filters are available. The room is equipped with gas, electricity, water and distilled water. A large light-proof fan gives adequate ventilation.

Service Rooms

The service rooms consist of the following units: (1) the stock room supplying the main laboratories; (2) storage rooms on the fourth floor for the operating supply of chemicals and apparatus; (3) storage rooms in the basement for the main supply of chemicals and apparatus; (4) solution room; and (5) preparation rooms adjacent to all main lecture rooms.

The stock room is centrally located to feed all the main laboratories. The wall tables, adjacent to the service windows leading into each laboratory, are stocked with the materials necessary for the servicing of those laboratories. The still, for the making of distilled water, and a large storage tank are located in the stock room. The water is piped from this tank into the various laboratories, solution room, and dark room. The distilled water outlets are tin-lined, self-closing bibcocks. Aluminum piping is used throughout.

A storage room for alcohol and inflammable solvents, a storage room for chemicals, and a storage room for apparatus maintain an adequate supply of materials for this stock room. These storage rooms are all connected to the stock room.

The solution room is fully equipped with a laboratory table, a hood, and all the necessary services including distilled water. There is ample shelf room for maintaining a complete supply of chemicals necessary for the preparation of solutions needed in the various laboratory courses.

The two large and well-ventilated storage rooms in the basement are used for storing the main bulk of chemical and apparatus supplies. A freight elevator makes these rooms readily available to the stock room on the fourth floor.

The preparation rooms adjoining lecture halls are equipped with working tables, hoods, and steel storage cabinets. All materials necessary for setting up of lecture demonstrations are stored in these rooms. Tables mounted on wheels are used for carrying the set-up demonstrations into the lecture room.

Biological Laboratory

The Biological Laboratory, a large, well-lighted room containing six dissecting tables, can accommodate thirty-six students.

General equipment includes simple and compound microscopes, binocular dissecting microscopes, microscopical stains, staining solutions, physiological preparations, reagents, chemicals, and glassware.

The zoological collection is especially good. It includes a complete series of invertebrate and vertebrate specimens for dissection and also various demonstration specimens. Among these are complete series of sponges, corals, flat worms, round worms, echinoderms, annelids, mollusks, arthropods, insects, and chordates; a series of heart models of different types of vertebrates and human hearts; a series of brain models of the most important vertebrate groups; a set of models to demonstrate the various cell types from human tissues; a set of models to demonstrate the principal steps in somatic mitosis; various other invertebrate, vertebrate, histological, and embryological models; zoological dissections in museum jars; skeletal preparations of the most important vertebrate groups including the human; a refrigerating unit and low temperature incubator; and a complete series of Leuckhart zoological charts.

The histological collection consists of some 2000 microscopical slides illustrating various forms of invertebrate, vertebrate, human, and plant tissues, while the botanical collection includes a complete series of both preserved and mounted botanical specimens.

Physics Laboratories

General Laboratory

The General Laboratory is fully equipped with large working tables, each provided with gas, alternating current, and direct current. Some also have water supplies for such experiments as require a constant flow. A separate balance room, a spectrometer room, a photographic room, and a photometer room are directly connected with this laboratory. A large amount of apparatus for all of the usual physics experiments is available so that the students may work alone, thus gaining confidence in laboratory technique. The students work in groups only when the experiment requires more than one person for its proper operation.

Advanced Laboratory

This laboratory is designed with a view to both precision and flexibility. A special switchboard provides single phase and polyphase alternating current and a variety of direct current potentials to be fed around to various working points. Two separate research rooms and a workshop with lathe, drill press, grinder, and a full set of tools complement the laboratory. Typical of the equipment available are a General Radio impedance bridge, high frequency bridge, wave analyzer, cathode ray oscillograph, and vacuum tube voltmeter, together with standards of resistance, inductance, and capacity manufactured by the same company. A communications type radio receiver and a large number of meters, amplifiers, discharge tubes, and vacuum tubes are available for electrical work.

In the field of light there are spectrometers, photometers, photocells, a Zeiss ECE330 microscope, polarizing equipment, projectors, etc. A Central Scientific cathetometer measuring to 0.05 mm. over a 97 cm. length is used for precision measurement of large objects. Vacuum pumps, blower, and large amounts of auxiliary apparatus give a well rounded set of equipment for the Advanced Laboratory courses and for research.

Astronomy Laboratory

This laboratory is in the penthouse of the West Building, close to a platform on the roof which gives a very good view free from obstructions. Equipment is available for the grinding of mirrors and the constructing of telescopes, and students are encouraged to build their own instruments. The Astronomy Club holds evening meetings in the laboratory regularly throughout the college year. The Club has made a good start in building up a library in its special field for the use of its membership.

Radio Laboratory

This is also in the penthouse of the West Building and is a completely shielded room high up from the street. Three masts support three horizontal antennae and a vertical ultra high frequency doublet. The transmitters operate on both radiotelephone and radiotelegraph as permitted in the amateur bands by the Federal Communications Commission. The maximum allowable power is available on all bands except the ultra high frequency ones. Full controls and safety devices make the operation simple and without hazard to the operators. Facilities are provided for research. The Radio Club uses this laboratory and supplies most of the operators.

Visual Education Equipment

Classroom instruction is frequently made more effective by the use of motion pictures and lantern slides. For this purpose, there are available moving picture projectors for both sound and silent films, and several lantern slide projectors, with lenses suitable for use in the various lecture halls. Day-light screens eliminate the necessity of totally darkening the room, thereby enabling students to take notes while viewing the pictures.

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OFFICE HOURS
DEPARTMENT OF ADMISSIONS
9 A.M. to 4 P.M. daily
Saturday 12.00 N'N
Wednesday Evenings by
Appointment

Northeastern University
College of Engineering

Paste a Small
Photo or
Snapshot
in This Space

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass.19

To Director of Admissions:

I (Name in full)

hereby respectfully apply for admission to the

- | | | |
|-----------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> Civil | <input type="checkbox"/> Mechanical | <input type="checkbox"/> Electrical |
| <input type="checkbox"/> Chemical | <input type="checkbox"/> Industrial | |

Engineering Curriculum of the College of Engineering for the school period beginning.....19.....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence..... Street
Town or City.....
State..... Tel.....
Date of Birth..... Age.....
Place of Birth.....
Race..... Religion..... Nationality.....
Graduate of..... High School, Year.....
Location of High School.....
Name of Principal.....
Other high schools you have attended.....
Names of Principals.....
If not a graduate, state the years of attendance and why you left.....
.....
Father's, Mother's, or Guardian's Name.....
.....
Address.....
Father's work, business or profession.....
Names and addresses of two other persons, to whom we may direct inquiries concerning you.....
.....
.....

Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

Name of person who will furnish transcript of your college record.....

Do you expect advance credit for past collegiate work?.....

List all athletics and other extra curricula high school activities you have engaged in.....

Names and addresses of all past employers with brief description of each job, length of employment, and wages received:.....

Date.....

Milton J. Schlagenhauf, Director of Admissions
Northeastern University
360 Huntington Avenue
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

.....
.....
.....
.....
.....
.....
.....
.....
.....

Name.....

Street and Number.....

Town or City.....

State.....

NORTHEASTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

COLLEGE OF BUSINESS ADMINISTRATION

Offers six curricula: Accounting, Banking and Finance, Marketing and Advertising, Industrial Administration, Journalism, and Public Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

SCHOOL OF LAW

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

SCHOOL OF BUSINESS

Offers curricula through evening classes in Accounting, Management — with Industrial and Merchandising majors, Law and Business Management, and Engineering and Management leading to the degree of Bachelor of Business Administration in specified fields or the Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. Examinations. Shorter programs may be arranged. Co-educational.

EVENING DIVISION OF THE COLLEGE OF LIBERAL ARTS

Offers a three-year evening program equivalent in hours to one-half of the requirement for the A. B. or B. S. degree. Provides general education and preparation for admission to the School of Law. Associate in Arts title conferred. Co-educational.

The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

Law School
47 Mt. Vernon Street

Other Schools
360 Huntington Avenue

Boston, Massachusetts
Telephone: KENmore 5800



Northeastern University

DAY DIVISION

COLLEGE OF BUSINESS ADMINISTRATION

1940-1941



BOSTON, MASSACHUSETTS

January, 1940

NORTHEASTERN UNIVERSITY

DAY DIVISION

COLLEGE OF BUSINESS ADMINISTRATION

Conducted on the Co-operative Plan

Catalogue for 1940-1941

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Freshman Calendar, 1940-1941

SEPTEMBER

S	M	T	W	T	F	S
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JANUARY

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JUNE

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31						

Days on which college exercises are held are indicated thus: **1, 2, 3.**

Sundays, holidays, and vacations are indicated thus: 1, 2, 3.

Upperclass Calendar, 1940-1941

SEPTEMBER

S	M	T	W	T	F	S
①	②	③	④	⑤	⑥	⑦
⑧	9	10	11	12	13	14
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OCTOBER

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DECEMBER

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APRIL

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JUNE

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JULY

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㉜						

Days on which Division A students are in college are indicated thus: 1, 2, 3.

Days on which Division B students are in college are indicated thus: 1, 2, 3.

Sundays, holidays, and summer periods are indicated thus: ①, ②, ③.

Calendar for the College Year, 1940-1941

1940

- AUGUST 28 *Wednesday*. Entrance condition examinations.
- SEPTEMBER 2 *Monday*. Labor Day. (College exercises omitted.)
- SEPTEMBER 5 *Thursday*. Registration and opening of college for freshmen. Students failing to register promptly on September 5 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 9 *Monday*. Opening of college for Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- OCTOBER 12 *Saturday*. Columbus Day. (College exercises omitted.)
- NOVEMBER 18 *Monday*. Opening of college for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- NOVEMBER 27 *Wednesday*. College exercises omitted after 1:00 p.m.
- NOVEMBER 28 *Thursday*. Thanksgiving Day. (College exercises omitted.)
- DECEMBER 24 *Tuesday*. College exercises omitted after 1:00 p.m.
- DECEMBER 25 *Wednesday*. Christmas Day. (College exercises omitted.)
- DECEMBER 23 }
JANUARY 4 } Vacation for freshmen.

1941

- JANUARY 1 *Wednesday.* New Year's Day. (College exercises omitted.)
- JANUARY 27 *Monday.* Second semester begins for freshmen and Division A upperclassmen. Co-operative work period begins for Division B upperclassmen.
- FEBRUARY 22 *Saturday.* Washington's Birthday. (College exercises omitted.)
- APRIL 5 *Saturday.* College year ends for Division A upperclassmen.
- APRIL 7 *Monday.* Second semester begins for Division B upperclassmen. Co-operative work period begins for Division A upperclassmen.
- MAY 24 *Saturday.* College year ends for freshmen.
- MAY 30 *Friday.* Memorial Day. (College exercises omitted.)
- JUNE 14 *Saturday.* College year ends for Division B upperclassmen.
- JUNE 15 *Sunday.* Baccalaureate Sermon.
- JUNE 16 *Monday.* Commencement.
- JUNE 17 *Tuesday.* Bunker Hill Day. (College exercises omitted.)
- JULY 4 *Friday.* Independence Day. (College exercises omitted.)
- SEPTEMBER 1 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 4 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 5 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 8 *Monday.* Opening of college year 1941-1942.

Faculty

The Executive Council

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D.	President of the University
Office 186 West Building	Res. 21 Beaumont Ave., Newtonville
FRANK PALMER SPEARE, M.H., LL.D.	President Emeritus
	Res. 90 Commonwealth Ave., Boston
EVERETT AVERY CHURCHILL, A.B., Ed.D.	Vice-President of the University
Office 138 West Building	Res. 48 Long Ave., Belmont
GALEN DAVID LIGHT, A.B.	Secretary-Treasurer of the University
Office 115 West Building	Res. 3 Preble Gardens Rd., Belmont

Administrative Officers

ASA SMALLIDGE KNOWLES, A.B., M.A.	Dean of the College of Business Administration
Office 352 East Building	Res. 41 Louise Rd., Belmont
HAROLD WESLEY MELVIN, A.B., M.A.	Dean of Students
Office 256 West Building	Res. 44 Houston Ave., Milton
WINTHROP ELIOT NIGHTINGALE, A.B., S.B., Ed.M.	Director of Co-operative Work
Office 253 West Building	Res. 136 Dickerman Rd., Newton Highlands
EDWARD SNOW PARSONS, S.B., Ed.M.	Director of Student Activities
Office 355 West Building	Res. 19 Hardy Ave., Watertown
JOHN BUTLER PUGSLEY, A.B.	Registrar
Office 254 West Building	Res. 23 Hardy Ave., Watertown
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A.	Director of Admissions
Office 150 West Building	Res. 96 Blakely Rd., Medford
	Telephone: Mystic 6148-M
WILLIAM CROMBIE WHITE, S.B., Ed.M.	Executive Secretary
Office 153 West Building	Res. 30 Summit Rd., Wellesley

Administrative Staff

WILLIAM THOMAS CLONEY, JR., A.B.	Director of the Publicity Bureau
Office 354 West Building	Res. 30 Lantern Lane, Milton
ALBERT ELLSWORTH EVERETT, S.B., M.B.A.	Co-ordinator of Co-operative Work
Office 253 West Building	Res. 4 Crown St., Auburndale
GEORGE RAYMOND FENNELL, S.B., M.B.A.	Assistant Director of Admissions
Offices 150 West Building and 350 East Building	Res. 42 Fremont Ave., Everett
MARY B. FOOR	Telephone: Everett 1172-W
Office 41 West Building	Manager of Bookstore
CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D.	Res. 32 Milton Rd., Brookline
Office 357 West Building	Executive Secretary, Northeastern Student Union
HENRY ARTHUR KONTOFF, M.D.	Res. 83 Franklin St., South Braintree
Office 479 Beacon St., Boston	College Physician
DONALD HERSHEY MACKENZIE, S.B., Ed.M.	Res. Overlook Park, Newton Centre
Office 355 West Building	Assistant to the Director of Student Activities
RUDOLF OSCAR OBERG, S.B., Ed.M.	Res. 178 Harriet Ave., Quincy
Office 253 West Building	Alumni Secretary
JOHN KENNETH STEVENSON, B.C.S.	Res. 37 Walker St., Atlantic
Office 117 West Building	Purchasing Agent
MYRA EDNA WHITE	Res. 101 Goden St., Belmont
Library, East Building	Librarian
	Res. 118 Hemenway St., Boston

Instructing Staff

Professors

ROBERT BRUCE, B.C.S., M.C.S.	Professor of Accounting
Office 100 South Building	Res. 53 Harley Ave., Everett
ALFRED D'ALESSANDRO, B.C.S., LL.B., C.P.A., M.B.A.	Professor of Accounting
Office 350 East Building	Res. 46 Radcliffe Rd., Belmont
STANLEY GODDARD ESTES, A.B., M.A., Ph.D.	Professor of Psychology
Office 256 West Building	Res. 60 Pinckney St., Boston
CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D.	Professor of Sociology
Office 357 West Building	Res. 83 Franklin St., South Braintree
JULIAN ERNEST JACKSON, A.B., LL.B., M.B.A.	Professor of Business Law and Management
Office 350 East Building	Res. 187 Woodcliff Rd., Newton Highlands
ASA SMALLIDGE KNOWLES, A.B., M.A.	Professor of Industrial Administration
Office 352 East Building	Res. 41 Louise Rd., Belmont
WILFRED STANLEY LAKE, A.B., M.A., Ph.D.	Professor of Economics
Office 452 East Building	Res. 69 Columbus St., Newton Highlands
HAROLD WESLEY MELVIN, A.B., M.A.	Professor of English
Office 256 West Building	Res. 44 Houston Ave., Milton

Associate Professors

ROGER STANTON HAMILTON, A.B., M.A.	Associate Professor of Economics
Office 363 East Building	Res. 1367 Walnut St., Newton Highlands
FREDERICK WILLIAM HOLMES, A.B., M.A.	Associate Professor of English
Office 453 East Building	Res. 258 Whiting Ave., East Dedham
NORRIS WHITFIELD POTTER, JR., A.B., M.A.	Associate Professor of History and Government
Office 363 East Building	Res. 34 Medfield St., Boston

Assistant Professors

WILLIAM THURLOW ALEXANDER, S.B., M.A.	Assistant Professor of Industrial Engineering
Office 100 South Building	Res. 22 West Highland Ave., Melrose Hlds.
ALBERT ELLSWORTH EVERETT, S.B., M.B.A.	Assistant Professor of Co-ordination
Office 253 West Building	Res. 4 Crown St., Auburndale
GEORGE RAYMOND FENNELL, S.B., M.B.A.	Assistant Professor of Marketing
Offices 150 West Building and 350 East Building	Res. 42 Fremont Ave., Everett
EVERETT CARTER MARSTON, A.B., M.A.	Assistant Professor of English
Office 453 East Building	Res. 40 Hereward Rd., Newton Centre
RUDOLF OSCAR OBERG, S.B., Ed.M.	Assistant Professor of Co-ordination
Office 253 West Building	Res. 37 Walker St., Atlantic
GERALD RUSSELL TATTON, S.B., M.B.A.	Assistant Professor of Physical Education
Office 355 West Building	Res. 61 Almont St., Medford
ROBERT DOUGLAS THOMSON, S.B.	Assistant Professor of Industrial Engineering
Office 352 East Building	Res. 411 Broadway, Lynn
JOHN WILLS TUTHILL, S.B., M.B.A.	Assistant Professor of Banking and Finance
Office 350 East Building	Res. 1A Gibson Terrace, Cambridge

Instructors

SIDNEY RALPH BLOOMFIELD, S.B.	<i>Instructor in Accounting</i>
Office 350 East Building	Res. 19 Coral Ave., Winthrop
REGINALD LAWRENCE CAPON, S.B., M.A.	<i>Instructor in English</i>
Office 453 East Building	Res. 58 Channing Rd., Newton Centre
WILLIAM THOMAS CLONEY, JR., A.B.	<i>Instructor in English</i>
Office 354 West Building	Res. 30 Lantern Lane, Milton
HENRY MARTIN CRUICKSHANK, S.B., M.B.A.	<i>Instructor in Industrial Engineering</i>
Office 350 East Building	Res. 338 Commonwealth Ave., Boston
JAMES WILLIAM DUNN, A.B.	
<i>Instructor in Physical Education and Head Coach of Football and Basketball</i>	
Office 355 West Building	Res. 12 Mason Rd., Watertown
HERBERT WENDELL GALLAGHER, S.B.	<i>Head Coach of Hockey and Baseball</i>
Office 355 West Building	Res. 164 Cabot St., Newton
WILLIAM HULTGREN	<i>Instructor in Physical Education</i>
Gymnasium Office, East Building	Res. 80 Woodside Rd., Winchester
THOMAS BRYAN LARSON, A.B., M.A.	<i>Instructor in History and Government</i>
Office 363 East Building	Res. 35 Goodrich Rd., Jamaica Plain
ROBERT EVERETT LAVEAGA, B.P.Ed., Ed.M.	<i>Instructor in Physical Education</i>
Gymnasium Office, East Building	Res. 91 Cross St., Belmont
ELLIS MERTON PURINTON	<i>Instructor in Co-ordination</i>
Office 253 West Building	Res. 7 Clark Ave., Beverly
PAUL EVERETT REYNOLDS, A.B., Ph.D.	<i>Instructor in English</i>
Office 453 East Building	Res. 15 Linden St., Framingham

Graduate Assistants

JOSEPH GOLEMME, S.B.	<i>Graduate Assistant in the Office of the Dean, College of Business Administration</i>
Office 352 East Building	Res. 22 Whiting St., Hanover
LYMAN ALBERT KEITH, S.B.	<i>Graduate Assistant in Business Administration</i>
Office 351 East Building	Res. 339 Lakeside Drive, Bridgewater
HAROLD THOMAS REGAN, S.B.	<i>Graduate Assistant in Economics</i>
Office 452 East Building	Res. 84 Pemberton St., Cambridge
MAXWELL ROSNOV	<i>Research Associate</i>
	Res. 6 Evelyn St., Mattapan

Faculty Committees

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CARL S. ELL, *Chairman*

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Northeastern University

General Statement

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the

New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools — the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the Evening Division of the

College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The Evening Division of the College of Liberal Arts offers an evening program the equivalent in hours to one-half of the requirements for the A.B. or B.S. degree, providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

Northeastern University and Affiliated Schools

Statistical Summary

1938-1939

	Administrative Officers and Faculty	Students
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	103	2112
College of Engineering		
College of Business Administration		
School of Law	50*	1461*
School of Business	105*	1550*
Evening Division, College of Liberal Arts	4**	33**
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Technical Institute	38	532
Lincoln Preparatory School	19	437
Huntington Day School for Boys		
Regular Term	16	171
Summer Term	10	146
Total	353	6442
Less Duplicates	42	403
	311	6039

*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

**The Evening Division of the College of Liberal Arts admitted students for the first time in September 1938.

The Co-operative Plan

How It Works

THE co-operative plan works in the following manner. Upperclassmen are divided into two nearly equal groups, one of which is called Division A and the other Division B. Each man is assigned a job with some business or industrial concern. So far as possible each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. In September the Division A student returns to the University for ten weeks of classroom work. At the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year so that an upperclassman has annually twenty weeks at college, twenty-six weeks at co-operative work, and six weeks of vacation.

Faculty Co-ordinators

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in an agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

Placement

The co-ordinator visits co-operative firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide,

including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

Supervision and Guidance

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by common agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which shall afford the student practical experience, give meaning to his program of study, and train him in reliability, efficiency, and team work.

Correlation of Theory and Practice

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for *at least one year* after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class do remain with their co-operating employers after graduation.

Co-operative Work Reports

The values to be derived from the practical experiences are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

Co-operative Work Records

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

Positions Available

Because of uncertainties of business conditions, as well as other reasons beyond its control, the University cannot and does not guarantee to place students. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups and students who are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

Earnings

The rates of pay for students tend to be low because students are given the privilege of attending college on the Co-operative Plan and because effort is made to provide the student with the opportunity of being transferred, at reasonable intervals, from one department to another of the co-operating company. It should be understood that the primary purpose of the Co-operative Plan is training.

The minimum rates of pay will be governed to a very large extent by prevailing wages-and-hours laws. To assist the student in budgeting his expenses, however, the following scale of wages may be considered as minimum rates received by students in times of normal business.

\$12 per week for second year students

\$14 per week for third year students

\$16 per week for fourth and fifth year students

Statistical records show that the pay actually received by students averages appreciably above these figures.

Location of Work

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

Types of Co-operative Work

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament, and other personal

qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.

For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering firms, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

Typical Co-operative Training Schedules

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

BOSTON & MAINE RAILROAD CO.

- ONE YEAR — Erecting Shop
- ONE YEAR — Machine Shop
- ONE YEAR — General work in Machine Shop and Erecting Shop
- ONE YEAR — Mechanical Engineer's Dept.

BOSTON EDISON COMPANY

The schedule of the Boston Edison Company is divided into the following general classifications. Very few co-operating students obtain experience in all branches, but students progress from year to year in the respective branches as conditions require.

Standardizing

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

Steam Practice

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

Electrical Testing

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

Chemical Engineering

- (a) Fuel analysis
- (b) Miscellaneous tests and analysis of oils, water paints, and other materials

*Photography**Office Work*

HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

Pyrometry

Use and care of Metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.

ONE YEAR Keeping of general metallurgical records, filing, and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

PEPPERELL MANUFACTURING COMPANY

ONE YEAR Stock Records

ONE YEAR Production Analysis

ONE YEAR Inventory Control

General Information

Tuition

THE tuition for all curricula in the Day Division is \$250 per year, or \$125 per term. Certain fees and deposits are also required as specified in the following paragraphs. A complete statement of tuition and fee payments is given on page 26.

Students who carry academic loads of greater or less than normal amount may pay their tuition on a semester hour basis.

General Library and Materials Fee

All students are charged a general library and materials fee of fourteen dollars *(\$14) each year. This fee is payable at the time of registration and is included in the schedule of payments on page 26.

Student Activities Fee

Each student in the Day Division is charged a student activities fee of sixteen dollars (\$16). This fee is payable at the time of registration and is included in the schedule of payments on page 26. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, *The Northeastern Student Union* and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. If the student shows signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

Chemical Laboratory Deposit

(Applies only to students taking chemical laboratory work)

All students taking chemical laboratory work are required to make a deposit from which deductions are made for breakage, chemicals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the end of the college year. If the charge for such breakage, chemicals, or destruction of apparatus is more than the sum deposited, the student will be charged the additional amount.

Freshmen make a chemical laboratory deposit of ten dollars with their first tuition payment at the beginning of the year; upperclassmen make a chemical laboratory deposit of ten dollars (\$10) at the beginning of each term.

*This fee is twelve dollars (\$12) for students who were enrolled in the Day Division prior to January 1, 1940.

Schedule of Payments for Freshmen

<i>Date Due</i>	<i>Amount</i>	
*September 5, 1940	Tuition	\$125.00
	Fees	30.00
		<hr/>
		\$155.00
February 3, 1941	Tuition	\$125.00

Schedule of Payments for Upperclassmen

	<i>Division A</i>	
*September 9, 1940	Tuition	**\$125.00
	Fees	28.00
		<hr/>
		\$153.00
*January 27, 1941	Tuition	\$125.00
	<i>Division B</i>	
*November 18, 1940	Tuition	**\$125.00
	Fees	28.00
		<hr/>
		\$153.00
*April 7, 1941	Tuition	\$125.00

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Director of School Administration.

Graduation Fee

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid before the end of the seventh week of the second term in the senior year.

Payments

All payments should be made at the treasurer's office. Checks should be made payable to Northeastern University.

*Students taking chemical laboratory work pay a deposit of \$10.00 additional.

**This tuition payment is \$100 instead of \$125 for all upperclassmen enrolled in the College prior to September 1, 1938.

Refunds

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except when students are compelled to withdraw on account of personal illness.

Expenses

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

Estimated College Expenses for a Freshman

Application Fee.....	\$ 5.
Tuition.....	250.
General Library and Materials Fee.....	14.
Chemical Laboratory Deposit.....	10.
Student Activities Fee.....	16.
Books and Supplies.....	35.
	<hr/>
	\$330.

(Engineering students should add approximately \$25 for drawing instruments and equipment.)

Estimated Living Expenses Per Week for a Freshman Residing Away from Home

Room Rent.....	\$ 3.75
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	<hr/>
	\$13.75

The figures given above are approximate and may not exactly apply to any one student; however, they will be found to represent fairly well the expense of a freshman who lives comfortably but without extravagance.

Textbooks and Supplies

The Northeastern University Bookstore, located in the Basement of the West Building, is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

A Northeastern Bookstore Discount Card will be issued to every Day Division student at the time of registration and will entitle him to a ten per cent discount on all Day Division textbooks which he purchases for his own use while in school.

The ten per cent discount will not apply on equipment, supplies or novelties. It will be the policy of the bookstore, however, to stock these materials and to sell them at the lowest possible prices.

Part-Time Work

Students who find it necessary to accept part-time jobs while attending college may obtain such work through the Director of Co-operative Work.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.

Examinations

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations will be given in all subjects during the week of July 7, 1941, for Division A students, and the week of September 1, 1941, for Division B students. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only by vote of the Administrative Committee, and for all such examinations the University requires the payment of a special fee of five dollars (\$5).

Grades

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work towards the Bachelor's degree)

- F failure, removable by condition examination
- FF complete failure (course must be repeated in class)
- I incomplete, used for intermediate grades only to signify that the student has not had time to make up work lost through excusable enforced absence from class
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student, who is required to ascertain when and how the condition can be removed.

Dean's List

A Dean's List, issued at the end of each term, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshman who achieve high scholastic standing are included on a Freshman Honor List, which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

Report Cards

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each term. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain an acceptable quality of college work. Parents and students are always welcomed by the college officers and faculty advisers for conference upon such matters.

Parents or guardians will be notified whenever students are advised or required to withdraw from the University.

Conduct

It is assumed that students come to the University for a serious purpose and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University or persistent neglect of work may be followed by dismissal; if the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

Scholastic Year for Seniors

Seniors of either division who are candidates for a degree in the current year must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

Attendance

Students are expected to attend all exercises in the subjects they are studying unless excused in advance. Exercises are held and students are expected to devote themselves to the work of the University between 9:00 A.M. and 5:00 P.M., except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9:00 A.M. and 1:00 P.M.

No cuts are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. If he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

Housing Regulations

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Director of School Administration, 254W.
3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Director of School Administration to change.
4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments.
5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.
6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

Residence

It has been found to be much more satisfactory for the student to live within easy access of Boston, especially during periods in college, than to live out twenty-five or thirty miles. The saving of time and effort more than offsets any increased expense. Residence in Boston is advisable, as it gives the student opportunity to use the college facilities outside of class hours and to confer more easily with his instructors about his college work.

Dormitories

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue., Boston, Massachusetts.

Buildings and Facilities

Boston—A Great Educational Center

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students.

Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

Location of University Buildings

The Day Division of Northeastern University is housed in three buildings located on Huntington Avenue, Boston, just beyond Massachusetts Avenue and opposite the historic Boston Opera House. The main administrative offices of the University are located in the West Building, a four-story brick structure added to the physical plant of Northeastern in 1938.

Transportation

The chief railroad centers of Boston are the North and South Stations. From the North Station board a car going to Park Street, at which junction transfer to any Huntington Avenue car. At South Station board a Cambridge subway train for Park Street Under. There change to a Huntington Avenue car and alight at the West Building of Northeastern University.

West Building

The West Building contains over 100,000 square feet of floor space for administrative and instructional purposes. In the basement are the Mechanical Engineering offices, laboratories, and machine shops; the University Bookstore; the Husky Hut, where light refreshments are sold; several classrooms; and a large drafting room used chiefly by the Department of Mechanical Engineering. Ample area is also provided in the basement for a student check room, lockers, and various storage rooms and vaults.

On the first floor are located the President's office, the General Offices of the Secretary-Treasurer, and the offices of the Vice-President of the University. A large public reception room adjoins the main lobby, and several small classrooms are located in both wings of the building. This floor was given to the University in memory of Lieutenant Stafford Leighton Brown by his mother.

The Department of Physics has a suite of offices, laboratories, and research areas in the south wing of the second floor. A large lecture hall with raised seats accommodating over three hundred people occupies the central area of the second floor. This room is fully equipped for both lantern slide and motion picture projection, and is provided with up-to-date motor driven ventilating equipment. The room is fitted with a lecture demonstration desk having all necessary accessories including gas, water, various types of electricity, and hoods for the removal of gases. A fully stocked preparation room adjoins this lecture hall. The offices of the Director of School Administration, the Director of Co-operative Work, and the Dean of Students, a large number of small classrooms, and several conference rooms complete the layout of the second floor.

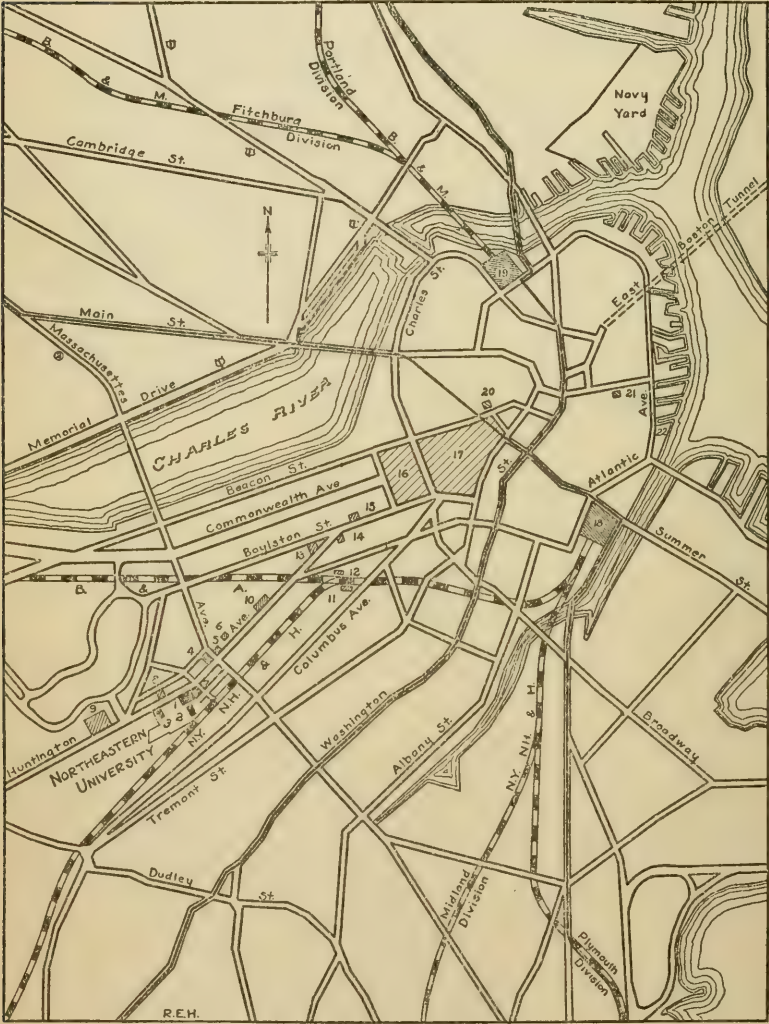
Student lounging and recreation rooms sponsored by the Northeastern Student Union occupy the Huntington Avenue side of the third floor, together with the offices of the Department of Student Activities. This floor also contains a small University Chapel, a lecture hall similar to that on the second floor but slightly smaller, and a number of large classrooms equipped with special tables for freshman drawing classes.

A group of large, fully equipped laboratories for Inorganic Chemistry and Qualitative Analysis, Physical Chemistry and Quantitative Analysis, and Organic Chemistry occupy the principal areas of the fourth floor. The Chemistry Department has its offices and a large lecture hall equipped especially for courses in chemistry adjoining these laboratories. A number of research areas for special purposes, a large central stockroom, a dark room, and several balance rooms complete the chemistry suite. Three large drafting rooms having blackboards especially equipped with sliding T-squares, an Art Room, and the offices of the Drawing Department, are also found on the fourth floor.

In the penthouse on the roof there are a faculty-alumni lounge, a radio laboratory, and an astronomy laboratory.

South Building

The South Building of Northeastern University comprises a basement and two stories. The Department of Electrical Engineering occupies the entire basement with its offices, Dynamo Laboratories, High Tension Laboratory, Electrical Measurements Laboratory, Instrument Room, and research areas.



MAP SHOWING NORTHEASTERN UNIVERSITY AND VICINITY

*Key to Map**Northeastern University and Vicinity*

1. EAST BUILDING
2. SOUTH BUILDING
3. WEST BUILDING
4. SYMPHONY HALL
5. HORTICULTURAL HALL
6. CHRISTIAN SCIENCE CHURCH
7. NEW ENGLAND CONSERVATORY OF MUSIC
8. BOSTON OPERA HOUSE
9. BOSTON MUSEUM OF FINE ARTS
10. MECHANICS EXHIBITION HALL
11. BACK BAY STATION
12. TRINITY PLACE
13. BOSTON PUBLIC LIBRARY
14. TRINITY CHURCH
15. MUSEUM OF NATURAL HISTORY
16. BOSTON PUBLIC GARDEN
17. BOSTON COMMON
18. SOUTH STATION
19. NORTH STATION
20. STATE HOUSE
21. U. S. CUSTOMS HOUSE
22. ROWES WHARF

On the first floor are located the Departments of Civil and of Industrial Engineering. A Hydraulics and Sanitary Engineering Laboratory, a Methods Engineering Laboratory, a Civil Engineering drafting room, and several classrooms complete the layout of this floor. A large lecture room, several classrooms, the Chemical Engineering Unit Operations Laboratory, the Chemical Engineering Department Offices, and the Biology Laboratory are located on the second floor.

East Building

The East Building of Northeastern University is the educational wing of the Huntington Avenue Branch of the Boston Y.M.C.A. On its second floor are located the library, a branch library and reading room, and several classrooms. The third floor contains the office of the Dean of Business Administration, several departmental offices, a laboratory for statistical work, and additional classrooms. On the fourth floor are located the office of the Dean of Liberal Arts, the Department of English, the Department of Modern Languages, several large lecture rooms, and a Student Union Reading Room.

Jacob P. Bates Hall, located in the East Building, has a seating capacity of 400. The hall is equipped with a motion picture machine and has a large stage suitable for entertainments of various kinds.

Bates Hall is an important center for various student activities. Here the band and the orchestra have their rehearsals, the glee club gives its entertainments, and some of the dramatic work is presented. Numerous student socials and small group dinners frequently are held here.

Natatorium

The swimming pool, 75 feet long by 25 feet wide, is supplied with filtered water and is heated to the proper temperature by an elaborate system of pipes. It is one of the finest of its kind in New England.

Gymnasium

This structure, the funds for which were provided by the relatives of the late Samuel Johnson, is known as the Samuel Johnson Memorial Gymnasium. The gymnasium provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, and electric cabinet baths.

Lecture Assembly Halls

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

Equipment for Physical Training

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining the West Building is a large field equipped for athletics. Here are two tennis courts, an outdoor gymnasium, a rifle range, a baseball cage, jumping pits, and a track with a 100-yard straightaway.

Huntington Field

Northeastern University owns and operates a large athletic field a short distance from the University. This field, known as the Huntington Field, provides ample facilities for track, baseball, football, and other outdoor sports. A bus service maintained between the field and the University makes it possible for students to get back and forth with a minimum loss of time. A new and commodious field house has recently been erected at the field as well as ten sections of stadium seats capable of seating 2,000 spectators.

Design and Drafting Rooms

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

Libraries

The library service of Northeastern University comprises the following units:

1. The Main Library, located on the second floor of the East Building, includes three reading rooms in which are available all of the general reference books, many of the professional and scientific volumes, and all of the periodicals (approximately 100) to which the University subscribes. This library is under the direction of a librarian and two assistants, all of whom have had special training for the work. Main library hours are as follows:

9:00	A.M.	to	10:00	P.M.	Daily
2:00	P.M.	to	9:00	P.M.	Sundays
12:00	M	to	9:00	P.M.	Holidays

2. The Branch Library, also located on the second floor of the East Building, houses most of the books on engineering and management with the exception of those in the field of chemical engineering, which, for greater convenience of students in this department, are kept in the Main Library. The Branch Library is in charge of a corps of student assistants and is open from 8:45 A.M. to 5:15 P.M. daily except Sundays. Students have access directly to the shelves which contain books on reserve for particular courses as well as general reference works.

3. A general reading room and library is maintained by the Northeastern Student Union in Room 356, West Building. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc., among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

Boston Public Library

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

Student Activities

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth-while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with *excessive* devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact, some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities, for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

Athletic Association

All students in the Day Division are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities appointed by the vice-president in charge of the Day Division. This committee decides what students are eligible to

participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as ex officio members.

The University maintains both varsity and freshman teams in basketball, baseball, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.

Tennis Club

The Northeastern University Tennis Club is open to all undergraduates. The Department of Student Activities appoints a faculty adviser who assists the members in conducting an intramural tennis tournament. Excellent facilities for tennis are afforded on the courts adjacent to the East Building of the University. In the early spring members of the Tennis Club have access to the gymnasium for indoor practice.

Mass Meeting

The hour from 12:00 to 1:00 on Wednesdays throughout the year is set aside for mass meetings. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers for the year will be found on page 11 of this catalogue. When the mass meeting hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

"The News"

A college newspaper, the *Northeastern News*, is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the *News* staff and promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The *Northeastern News* is a member

of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the *News* are mailed to upperclassmen when they are at co-operative work and to freshmen after the close of their college year.

"The Cauldron"

The senior class publishes annually a college year book, *The Cauldron*. It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

The Handbook

Each fall the Northeastern Student Union issues a conveniently sized student *Handbook*, which is sold to students at a nominal price. The book contains information about the various college clubs, athletic programs, fraternities, rules governing freshmen, lockers, publications, and so on. The *Handbook* also includes a diary for the college year in which it is issued.

Student Council

Student government of the Day Division at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject to faculty approval, over all such matters as customs, privileges, campus regulations, etc. and meets regularly to consider and act upon issues referred to it for decision. The Dean of Students serves as faculty adviser to the Student Council.

Honor Societies

Three honorary societies are chartered by the University in its Day Division:

The Senate, in the College of Engineering.

The Sigma Society, in the College of Business Administration.

The Academy, in the College of Liberal Arts.

Election to the college honorary fraternity is founded primarily upon scholarship, but before a man is privileged to wear the honorary society insignia he must give evidence of an integrity of character and an interest in the extra-curricula life of the Uni-

versity as well as an acceptable personality. The Societies have memberships consisting of the outstanding men in the Day Division. Election to the honorary society is the highest honor that can be conferred upon an undergraduate.

Fraternities

There are at present ten local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- | | |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma | 6. Phi Beta Alpha |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi |
| 3. Eta Tau Nu | 8. Sigma Phi Alpha |
| 4. Nu Epsilon Zeta | 9. Kappa Zeta Phi |
| 5. Sigma Kappa Psi | 10. Gamma Phi Kappa |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

Professional Societies and Clubs

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored.

Accounting — Law Club

All students interested in accounting and law are invited to join this stimulating club. Problems and cases involving the interrelations of accounting and law are presented and discussed at club meetings. Although upperclassmen usually present problems arising out of thesis or co-operative work, speakers from the professional world come to the meetings to present papers and lead the student discussion.

Banking Club

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the College of Business Administration, is eligible to active membership in this club. Meetings are held each ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field of banking.

National Engineering Societies

Students in the several professional curricula of the College of Engineering operate Northeastern University Sections of the appropriate national engineering societies. Chief among these are the following:

American Society of Mechanical Engineers
Boston Society of Civil Engineers
American Institute of Chemical Engineers
American Society for the Advancement of Management
American Institute of Electrical Engineers

Members of the engineering faculty who hold membership in the parent organizations serve as advisers to these student groups. Meetings are held regularly, usually at night so that students from both Divisions may attend, and practicing engineers are invited to address the Section. Occasionally appropriate motion pictures are shown, or the group visits some current engineering project in the vicinity of Boston. The College of Engineering encourages these student sections of the technical societies in the belief that they provide a wholesome medium for social intercourse as well as a worth-while introduction to professional life.

Affiliated Engineering Societies of New England

Membership in the student sections of the Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Affiliated Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides very valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

International Relations Club

The International Relations Club was founded in 1932 for the purpose of studying and discussing those current national and international events and issues which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upper-classmen who maintain good scholarship.

Astronomy Club

Membership in the Astronomy Club is open to all students in the College of Engineering who maintain satisfactory scholastic standing. The club has access to machine shops for the construction of telescopes and other instruments. It also has quarters in the penthouse on the fifth floor of the West Building. Meetings are held twice a month for the purpose of making astronomical observations and carrying on appropriate discussions.

Debating Society

The purpose of the Debating Society, formed in 1936, is "to foster and promote an interest and facility in formal argumentation; to develop an impartial, unbiased, and intellectual consideration of questions and issues of current interest; and to sponsor intercollegiate relationships and competition in the debating field." Membership is open to all students of the Day Division.

Radio Club

One of the most popular undergraduate activities is the Northeastern University Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Radio Laboratory in the penthouse of the West Building. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings, when students in both divisions may attend.

Dramatic Club

Students interested in dramatics have an opportunity to cultivate this art under faculty coaches who co-operate with the Dramatic Club in the production of several pieces in the course of each college year. Frequently the Northeastern Dramatic and Glee Clubs collaborate with those of Simmons College in light operas such as those of Gilbert and Sullivan.

Rifle Club

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting. Those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

Musical Clubs

The Department of Student Activities sponsors the following musical clubs: an orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Division. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Camera Club

The Camera Club welcomes all men interested in photography. Weekly discussions and special evening lectures by guest artists are part of the yearly program. Field trips, monthly photo contests and a general exhibition add to the interest and progressive work of this organization.

Mathematics Society

The Mathematics Society encourages the study of topics of mathematical interest which are either outside or beyond the scope of the regular mathematics courses. Membership is restricted to those men who have completed one and one-half years of study in mathematics and have an average grade of not less than "C" in mathematics courses up through differential calculus. The club meets once every five weeks in the evening. Although membership is limited to upperclassmen, any student is always welcome to any meeting, and freshmen especially interested in mathematics are always welcome.

The final program of the year is devoted to a dinner meeting for which some prominent outside speaker is procured.

Class Organization and Activity

Each of the Classes in the Day Division elects its officers and carries on activities as a class. Dances are sponsored by the classes at regular periods throughout the year. One of the high lights of the social program is the Junior Promenade, held each spring at one of the Boston hotels.

Seniors plan a whole week of activities just prior to Commencement in June.

Freshmen are required to wear the red and black cap distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

The Northeastern Student Union

The purpose of the Northeastern Student Union is to carry out the work of a Christian association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra-curricula work.

The Union conducts a weekly Chapel Service in the little chapel in the West Building, to which all faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8:40 to 8:55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

Awards and Prizes

Public Speaking Contest

Each spring the University conducts a Public Speaking Contest for which all students in the Day Division are eligible. Prizes of fifty, twenty-five, fifteen, and ten dollars respectively are awarded to the four ablest speakers at a general mass meeting of the student body.

Speeches are original in nature and about ten minutes in length. The judges base their decision on appropriateness of subject, content, and delivery. Preliminary contests are held during the winter in each division.

Alcott Award

In 1934 the William Jefferson Alcott, Jr. Memorial Fund was established by the faculty and other friends to perpetuate the memory of Professor Alcott who was a member of the Department of Mathematics in Northeastern University from 1924 until his death in 1933.

Each year the income from this fund is used for a suitable award to the Northeastern University Day Division student who has made some outstanding academic achievement during the preceding year. The recipient of the award is chosen by a committee elected by the faculty.

Alumni Association

The alumni of the Day Division are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

Among the events sponsored by the Alumni Association are the annual meeting and reunion; the annual alumni-varsity basketball game; and class reunions. The Association also awards a track trophy each year and contributes to the Alumni Student Loan Fund.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

Officers of the Alumni Association

President

LINDSAY ELLMS '23

Vice President

GEORGE A. MALLION '20

Secretary

EARL H. THOMSON '25

Treasurer

WILLIS P. BURBANK '31

Executive Committee

FARNHAM W. SMITH '24

RAYMON D. TELLIER '28

JOHN W. GREENLEAF, JR. '30

GEORGE DAVENPORT '28

JAMES W. DANIELS '25

Alumni Executive Secretary

RUDOLF O. OBERG '26

Alumni Council Representatives

1913-1920 JOHN R. McLEISH

1929—HAROLD L. BURTON

HARRY J. FREEMAN

1930—DEXTER W. LOVELL

PERRY F. ZWISLER

ALEXANDER G. MACGREGOR

1921—ROGER E. SPEAR

1931—DONALD H. MACKENZIE

1922—RICHARD B. BROWN

1932—SIDNEY A. STANDING

1923—THOMAS A. STEVENS

1934—J. LLOYD HAYDEN

1924—FARNHAM W. SMITH

1935—HARTWELL G. HOWE

1925—RENE G. MAURETTE

1936—FREDERIC S. BACON, JR.

1926—EARL L. MOULTON

1937—JOHN F. SHEA

1927—RUDOLPH A. LOFGREN

1938—CHESLEY F. GARLAND

1928—WILLIAM E. R. SULLIVAN

THE COLLEGE OF BUSINESS ADMINISTRATION

Aims and Methods

FORMERLY when a student finished high school and decided to make his way in the business world he could go about it in one of two ways: (1) Obtain a position in a particular field of commerce or industry and by beginning at the bottom learn the business from the job of the office boy to that of the president, or (2) enter a liberal arts college and after four years of general study enter business just as he would have had he not attended college. It was hoped that his broad college training and collegiate contacts would push him along "through the ropes" faster than the young man who went straight into business from high school. In either event this system of apprenticeship worked out very well in training a man in business and those who had the push and ability went to the front. This continued just so long as business organization was limited to relatively small units. In the small business there was time and opportunity for employer and employee — boss and apprentice — relationships. A man could learn much from his superiors, and recognition in the way of promotion in salary or responsibility rewarded those whose ability warranted it.

The Problem of Today

What of today? Can a student go "through the ropes" and progress today as his father did in his youth and early manhood? The answer is: probably not. We can see just reason for the negative answer when we consider our present business world. We are surrounded on every hand by "big business" where the employee is lost in the vast number of workers of every large organization. The old time employer who trained his own men is passing out of the business scene. This does not mean that there is any less need for training about the conduct of business. It does mean that the training has got to be done by some other person or institution especially equipped to do the job in a most thorough manner. Actually the training for business positions of real importance is more necessary today than ever before. To satisfy this very apparent need colleges of business administration have appeared and grown in size and importance within the last twenty-five years. Among institutions for the training of young men who intend to undertake business as a profession, Northeastern University offers to those properly qualified a college training in business administration, leading to the degree of Bachelor of Science in Business Administration.

Business Education on the College Level

Although it is true that collegiate training for business is relatively new in the field of higher education, it is also evident that collegiate business schools are beyond the stage of early experimentation and have emerged on a level with other college courses recognized as higher education. There is a certain advantage in newness in that the mere youth of the college keeps it up-to-date in its outlook and scope of activity. In addition it is not bound by the traditional but obsolete practices sometimes found in older branches of education.

We hear a good deal today about the increasing need for specialists in business. It is asserted that modern business institutions have become so large that no one man can administer the many matters of routine involving executive judgment. The need for specialists is self-evident, but the training best suited for preparing the individual to take over specialized executive authority is not so evident. There are many schools offering a short course of training in preparation for these specialized positions. Such training cannot give a man the breadth of vision needed to go beyond minor managerial jobs demanding attention to exhausting details of daily routine.

To pass beyond this on the way to responsibility of truly executive nature a background of general business and related knowledge is essential. This background should precede the specialized study into a particular branch of business, enabling one to see the whole business and industrial picture and not merely one branch of it. Executive administration cannot be taught with any adequacy by attacking one subject, no matter how carefully planned the approach and how thorough the course of study. For instance, accounting is not the only means of arriving at a production budget based on sales estimates; it is but one of the tools. A knowledge of marketing, finance, statistics, and management technique are also needed. Vision and sound judgment can then make all of these branches of information serve to best advantage.

Aims of the College

In keeping with current trends in collegiate business education the educational policy of the College is directed toward the achievement of the following purposes:

First: To offer that type of education for business which will enable students to select most advisedly the field of business best suited to their aptitudes. The co-operative plan is particularly effective in this respect.

Second: To build for breadth of perspective in preference to over-specialization with its narrowing effects; therefore, to elim-

inate haphazard selection of courses, through concentration upon balanced, carefully co-ordinated curriculums, and thus to provide an adequate background for specialization as need arises.

Third: To provide a thorough knowledge of fundamental economic laws and an understanding of their applications in business.

Fourth: To develop the habits of accurate thinking that are essential to sound judgment.

Fifth: To develop in all students attitudes and ideals that are ethically sound and socially desirable.

Methods

In order that these aims may be realized as fully as possible, the College makes use of the problem and the case methods of instruction in addition to the lecture and recitation system. Mere textbook reading alone is almost valueless; students tend to accept without question what the textbook presents. Instead, they should learn to analyze every proposition, to challenge unsupported assertions, to think independently, and to support their thinking with logic and facts.

Hence, concrete problems and cases which executives have faced in accounting, marketing, organizing, and the like, constitute the bulk of class work. Students analyze problems, break them into their constituent parts, discover and list the factors for and against possible solutions, and work out a logical conclusion. In class they discuss their work with their instructors in the light of the latter's broader knowledge.

Such a method tends to develop an executive attitude. No lecture or mere reading of textbooks can do so. Students gain skill and facility in solving problems by actually solving many hundreds of them, thereby accumulating a ripe experience seldom open to the petty employee buried in routine and mechanical detail. What counts in business, as elsewhere, is not solely whether one possesses much knowledge, but whether through his knowledge one can logically and effectively solve the problems he confronts, or possibly prevent problems from arising. Experience in solving typical problems provides a background for anticipating and forestalling similar ones as well as for solving others that may arise.

Equipment

Visual Education Equipment

Classroom instruction is made more effective by the use of motion pictures and lantern slides. For this purpose there are available projectors for 16 mm. and 35 mm. films. Complete

sound motion picture apparatus is also available. New and powerful Delineascopes project the lantern slides. Stationary as well as portable day light screens enable students to take notes while viewing the pictures.

Business Laboratory

Students have available for laboratory work in accounting and statistical methods all of the commonly used office machines. These are available in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps.

The laboratory is in charge of a graduate assistant whose work is to maintain the equipment in excellent condition and to give instruction in the use of the various office machines.

Principal pieces of equipment in the laboratory include duplicators, typewriters, hand and electric calculators, and both hand and electric adding machines.

Admission Requirements

APPPLICANTS for admission to the freshman class without restrictions must qualify by *one* of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.

2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.

3. Examinations.

(Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

Prescribed Subjects for Admission

College of Business Administration

Mathematics	1 unit
Natural Science	1 unit
History, Social Studies and/or foreign language	3 units
English	3 units
*Electives	7 units
Total	15 units

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Committee on Admission reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

Other Requirements

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along with the formal requirements stated above, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for

*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and most important of all — his character, all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

Personal Interview

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Application for Admission

Each applicant for admission is required to fill out an application blank whereon he states his previous education, as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5) is required when the application is filed. This fee is non-returnable.

The last page of this catalog is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to the Director of Admissions, Northeastern University, Boston, Mass.* Checks should be made out to Northeastern University.

Candidates are urged to visit the Office of Admissions for personal interview if it is possible for them to do so before submitting their applications. Office hours of the Department are from 9:00 A.M. to 4:00 P.M. daily; Saturdays to 12:00 M. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Applications should be filed not later than May first, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

Trustee Scholarships

Each year Northeastern University grants in the College of Business Administration a limited number of full tuition scholarships to entering freshmen who have demonstrated, throughout their preparatory or high school course, superior scholarship. For additional information relative to these scholarships, communicate with the Director of Admissions.

Registration

Eligibility for admission does not constitute registration. Freshmen register at the University on September 5, 1940. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have had inadequate preparation in any of his prerequisite subjects, the Faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry. Students admitted to advanced standing are not eligible for placement for co-operative work until they have completed a full year of academic work at the University.

Entrance Condition Examinations in Boston

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the University unless special arrangements are made with the Department of Admissions to administer them elsewhere.

Students are advised to take such examinations on the earliest possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10:00 A.M. to 12:00 M.
1:00 P.M. to 3:00 P.M.

During the current year examinations will be given on the following days: June 5, 1940, August 28, 1940. All other examinations will be given by special assignment.

Freshman Orientation Period

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated preceding the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp is planned particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag in the northern part of Massachusetts is admirably equipped for this purpose, having ample facilities for baseball, basketball, tennis, boating, and swimming. The cost of the two days at camp is nominal and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

Physical Examination

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2).

Freshman Counsellors

At the time of his matriculation each freshman is assigned to a personal counsellor, a member of the faculty, who serves as an interested and friendly counsellor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from

his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in counselling work. The aim of the freshman counselling system is primarily to assist students in making an effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Counselling is under the direction of the Dean of the College, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of problem cases.

Individual Attention to Freshmen

Not only is attention given to the problems of the student in connection with his studies, but also the service is extended to include help upon any problem in which advice is needed and desired, the aim being to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, considering his previous school record, his score on the psychological test, and the other factors in his situation. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue to do so. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.

Requirements for Graduation

Students may qualify for the degree of Bachelor of Science in Business Administration in one of the following options:

Accounting, Marketing and Advertising, Public Administration, Banking and Finance, Industrial Administration, Journalism.

Candidates for the Bachelor of Science degree must complete all of the prescribed work of the curriculum in which they seek to qualify with a degree of proficiency acceptable to the faculty. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the B.S. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

Scholarship Requirements

Any student who fails to show a satisfactory standard of general efficiency in his professional field may be required to demonstrate his qualifications for the degree by taking such additional work as the faculty may prescribe. If he is clearly unable to meet the accepted standard of attainment, he may be required to withdraw from the University. The degree conferred not only represents the formal completion of the subjects in the selected course of study but also indicates professional competence in the designated field of business administration.

Graduation with Honor

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor or with highest honor. Students must have been in attendance at the University at least two years before they may become eligible for graduation with honor, with high honor, or with highest honor.

Thesis Option

Theses are not required of candidates for the degree of Bachelor of Science in Business Administration. Students who show special aptitude for thesis work, however, may be permitted to substitute an appropriate thesis for equivalent work in class. Such permission must be obtained by the candidate from the Dean of the college.

The Programs of Study

First Year

A FULL YEAR of thirty five weeks is devoted to a thorough understanding of the basic principles underlying the conduct of business, including the Legal Bases of Business — how business is organized and protected under the law.

The student is also acquainted with the existing business structure and given an appreciation of its conception and growth in terms of the distribution of industrial resources, and the historical development of business and industry.

Other basic courses are in keeping with the personal needs of the student and preparatory to the work which follows in the upper years of his course. Throughout the year each student has the friendly counsel and guidance of a faculty adviser whose aim is to help bridge the gap between high school and college.

Second Year

Co-operative training is started in the second year. Two ten-week terms of college work are required. Twenty-six weeks of business practice with co-operating firms may be included. The academic training continues the foundation program in economics, finance, marketing and accounting. At this point, also, special attention is given to the student's prospective needs during and after his college career by way of expressing himself orally and in writing, giving particular attention to the development of an effective style for business writing of every sort.

Third Year

In the third year, the completion of the foundation program gives way to the beginnings of specialized training. The student rounds off his work in the third year through the study of economic problems, corporation finance, money and banking, industrial management, and a course in advanced accounting.

At the end of the third year the students elect the professional curricula offerings in accordance with their major fields of interest and natural aptitudes.

The Professional Options

All students are required to take common courses in their fourth and fifth year which are deemed necessary for a well rounded training. These are pursued jointly with the professional work which has been selected, with a view to meeting the changing

and expanding needs of present day business conduct, while at the same time meeting the vocational needs of the students by way of earning a living. A brief statement of the vocational opportunities in the fields of work represented by each of the professional options follows:

Accounting

Many successful careers are open to the professional accountant. His services are demanded by business, commerce and industry. Public and private enterprises seek adequately trained men. Better known among the wide variety of titles descriptive of their work are: public and private accountant, cost accountant, resident and traveling auditor, credit manager, statistician, investigator, adjuster, and financial accountant.

Marketing and Advertising

Business and industry must sell their services and products to each other and to the general public. Successful selling means more than being a salesman. It demands knowledge of distribution channels, markets and buying habits, as well as sales resistance. It means also, knowing how to buy in order to sell and then how to organize, promote, and carry out a sales campaign.

The following list is representative of the vast array of Marketing and Advertising occupations: sales manager, supervisor, analyst and correspondent, advertising manager, promotion manager, copy supervisor, space buyer, and publicity director; market, product and sales analyst, industrial salesman, sales personnel supervisor, field representative, missionary salesman, and manufacturer's agent.

Public Administration

The tremendous increase in the number of agencies regulating both public and private enterprise has opened up an increasing number of desirable career posts in both the state and federal governments. These afford real opportunities for those who have training in the fundamentals of business, together with special training in the problems of administration as related to government work. The typical positions include: division chiefs, bureau heads, department heads, foreign and domestic representatives of the many departments, bureaus and agencies of our government.

Industrial Administration

Increasingly the manufacturer is looking to the business school for well trained men to undertake cost work, production control, planning, methods analysis, and the solution of sales problems peculiar to the manufacturer. Moreover, Industrial Administrators are increasingly turning attention to the effective administration of better employer-employee relations. This points the way toward a growing need for trained managers of personnel relations.

The vocational opportunities of industrial administration include: personnel management, traffic management, office management, industrial purchasing; manufacturing, supervisory and executive work, inventory and production control, production planning, setting shop standards, wage rate administration, and supervision of shop personnel.

Journalism

No professional field of work commands greater public attention and respect than Journalism. The development, promotion, operation, and management of the many city, town, and country newspapers, multitudinous magazines, journals, house organs, company newspapers, etc., require sound business training and definite knowledge of the relationships of business management, including advertising, sales promotion as well as an ability to write.

The business school graduate is at a premium, therefore, in the field of Journalism. The publishing business is one requiring an executive personnel that is both broad and well trained. The specialist in this field handles circulation as well as advertising, and distribution as well as production of the publication itself.

Banking and Finance

Financial institutions serving present day business and industry are its life stream. Any list of these organizations which are indispensable in the conduct of business must include: banks, insurance companies, investment houses, credit concerns, financial exchanges, business forecasting organizations, financial service institutions, mortgage companies, national and local real estate brokerage firms, and appraisers.

Specific courses offered in Northeastern University's College of Business Administration open the door to a host of careers in these institutions as well as the many governmental regulatory agencies controlling their operations.

Pre-legal Curriculum

Effective September 1, 1938, by a ruling of the Supreme Judicial Court of Massachusetts, in order to be eligible for examination for admission to the Bar, an applicant must have completed certain general educational requirements before beginning his legal education. Briefly, this general education must comprise graduation from a four-year high school and the completion of not less than half of the work accepted for the Bachelor's degree in a college approved by the Board of Bar Examiners.

Recognizing that business training furnishes an excellent background for pre-legal training, the College of Business Administration offers a pre-legal curriculum. This consists of taking an amount of work in the College equivalent to that required for admission to specific law schools in the Commonwealth, and usually requires residence in school during the entire freshman year and for 30 weeks during the sophomore year. The approximate cost for the normal pre-legal program is \$600.00. Students should consult with the Dean of the College before electing a pre-legal program.

Option I Accounting

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English.....	3	E 2-B	English.....	3
Gv 1-A	American Government	3	Gv 2-A	American Government	3
P 1-A	Surv. of Phys. Science..	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography..	4	Ec 2	Comm. & Ind. Hist. of U.S.....	4
U 1	Legal Bases of Bus.....	4	U 2	Business Associations..	3
Ps 1-A	Probs. of College Life..	0	PE 2	Hygiene.....	1
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
		18			18
<i>Second Year</i>					
E 3-B	Report Writing.....	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles...	2	Ec 4	Economic Principles...	2
FI 3	Business Finance.....	3	FI 4	Business Finance.....	3
Ps 1-B	Psychology.....	2	Ps 2-B	Psychology.....	2
AC 1	Accounting I.....	3	AC 2	Accounting I.....	3
		12			12
<i>Third Year</i>					
Ec 5	Economic Problems...	2	Ec 6	Economic Problems...	2
FI 5	Corporation Finance...	2	FI 6	Banking and Business..	2
IA 1	Industrial Management I	2	IA 2	Industrial Management II	2
MA 1	Marketing Principles...	3	MA 2	Marketing Problems...	3
AC 3	Accounting II.....	3	AC 4	Accounting II.....	3
		12			12
<i>Fourth Year</i>					
E 13	Effective Speaking.....	1	E 14	Effective Speaking.....	1
Ec 9	Statistics in Business...	2	Ec 10	Statistics in Business...	2
AC 5	Cost Accounting.....	3	AC 6	Cost Accounting.....	3
AC 7	Income Tax Accounting	3	AC 8	Public Accounting....	3
	Liberal Course.....	3		Liberal Course.....	3
		12			12
<i>Fifth Year</i>					
PA 5	Business and Gov't....	2	U 4	Business Policy.....	2
E 5-B	Adv. Report Writing...	2	FI 12	Public Finance.....	2
U 5	Legal Aspects I.....	2	U 6	Legal Aspects II.....	2
AC 9	C.P.A. Problems.....	3	AC 10	C.P.A. Problems.....	3
	Liberal Course.....	2½		Liberal Course.....	2½
C 11	Business Conference...	½	C 12	Business Conference...	½
		12			12

Option II Banking and Finance

FIRST TERM			SECOND TERM		
No	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English.....	3	E 2-B	English.....	3
Gv 1-A	American Government	3	Gv 2-A	American Government	3
P 1-A	Surv. of Phys. Science	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography..	4	Ec 2	Comm. & Ind. Hist. of U. S.....	4
U 1	Legal Bases of Bus.	4	U 2	Business Associations	3
Ps 1-A	Probs. of College Life..	0	PE 2	Hygiene.....	1
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
		18			18
<i>Second Year</i>					
E 3-B	Report Writing.....	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles...	2	Ec 4	Economic Principles...	2
FI 3	Business Finance.....	3	FI 4	Business Finance.....	3
Ps 1-B	Psychology.....	2	Ps 2-B	Psychology.....	2
AC 1	Accounting I.....	3	AC 2	Accounting I.....	3
		12			12
<i>Third Year</i>					
Ec 5	Economic Problems...	2	Ec 6	Economic Problems...	2
FI 5	Corporation Finance...	2	FI 6	Banking and Business..	2
IA 1	Indus. Management I...	2	IA 2	Indus. Management II...	2
MA 1	Marketing Principles...	3	MA 2	Marketing Problems...	3
AC 3	Accounting II.....	3	AC 4	Accounting II.....	3
		12			12
<i>Fourth Year</i>					
E 13	Effective Speaking.....	1	E 14	Effective Speaking.....	1
Ec 9	Statistics in Business...	2	Ec 10	Statistics in Business...	2
AC 7	Income Tax Accounting	3	FI 8	Adv. Banking Probs...	3
FI 9	Investments.....	3	FI 10	Investments.....	3
	Liberal Course.....	3		Liberal Course.....	3
		12			12
<i>Fifth Year</i>					
PA 5	Business and Gov't....	2	U 4	Business Policy.....	2
E 5-B	Adv. Report Writing...	2	FI 12	Public Finance.....	2
U 5	Legal Aspects I.....	2	U 6	Legal Aspects II.....	2
FI 13	R.E. Prac. & Appraising	3	FI 14	Ins. Prins. & Practices.	3
	Liberal Course.....	2½		Liberal Course.....	2½
C 11	Business Conference...	½	C 12	Business Conference...	½
		12			12

Option III Marketing and Advertising

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English	3	E 2-B	English	3
Gv 1-A	American Government	3	Gv 2-A	American Government	3
P 1-A	Surv. of Phys. Science	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography	4	Ec 2	Comm. & Ind. Hist. of U. S.	4
U 1	Legal Bases of Bus.	4	U 2	Business Associations	3
Ps 1-A	Probs. of College Life	0	PE 2	Hygiene	1
PE 3	Physical Training	0	PE 4	Physical Training	0
		18			18
<i>Second Year</i>					
E 3-B	Report Writing	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles	2	Ec 4	Economic Principles	2
FI 3	Business Finance	3	FI 4	Business Finance	3
Ps 1-B	Psychology	2	Ps 2-B	Psychology	2
AC 1	Accounting I	3	AC 2	Accounting I	3
		12			12
<i>Third Year</i>					
Ec 5	Economic Problems	2	Ec 6	Economic Problems	2
FI 5	Corporation Finance	2	FI 6	Banking & Business	2
IA 1	Industrial Mgt. I	2	IA 2	Industrial Mgt. II	2
MA 1	Marketing Principles	3	MA 2	Marketing Problems	3
AC 3	Accounting II	3	AC 4	Accounting II	3
		12			12
<i>Fourth Year</i>					
E 13	Effective Speaking	1	E 14	Effective Speaking	1
Ec 9	Statistics in Business	2	Ec 10	Statistics in Business	2
MA 3	Sales Management	3	MA 4	Sales Management	3
MA 5	Advertising Principles	3	MA 6	Advertising Problems	3
	Liberal Course	3		Liberal Course	3
		12			12
<i>Fifth Year</i>					
PA 5	Business and Gov't	2	U 4	Business Policy	2
E 5-B	Adv. Report Writing	2	FI 12	Public Finance	2
U 5	Legal Aspects I	2	U 6	Legal Aspects II	2
MA 7	Retail Merchandising	3	MA 8	Retail Merchandising	3
	Liberal Course	2½		Liberal Course	2½
C 11	Business Conference	½	C 12	Business Conference	½
		12			12

Option IV Industrial Administration

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English	3	E 2-B	English	3
Gv 1-A	American Government	3	Gv 2-A	American Government	3
P 1-A	Surv. of Phys. Science	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography	4	Ec 2	Comm. & Ind. Hist. of U. S.	4
U 1	Legal Bases of Bus.	4	U 2	Business Associations	3
Ps 1-A	Probs. of College Life	0	PE 2	Hygiene	1
PE 3	Physical Training	0	PE 4	Physical Training	0
		18			18
<i>Second Year</i>					
E 3-B	Report Writing	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles	2	Ec 4	Economic Principles	2
FI 3	Business Finance	3	FI 4	Business Finance	3
Ps 1-B	Psychology	2	Ps 2-B	Psychology	2
AC 1	Accounting I	3	AC 2	Accounting I	3
		12			12
<i>Third Year</i>					
Ec 5	Economic Problems	2	Ec 6	Economic Problems	2
FI 5	Corporation Finance	2	FI 6	Banking & Business	2
IA 1	Industrial Mgt. I	2	IA 2	Industrial Mgt. II	2
MA 1	Marketing Principles	3	MA 2	Marketing Problems	3
AC 3	Accounting II	3	AC 4	Accounting II	3
		12			12
<i>Fourth Year</i>					
E 13	Effective Speaking	1	E 14	Effective Speaking	1
Ec 9	Statistics in Business	2	Ec 10	Statistics in Business	2
IA 3	Personnel Adminis.	3	IA 4	Personnel Problems	3
AC 5	Cost Accounting	3	AC 6	Cost Accounting	3
	Liberal Course	3		Liberal Course	3
		12			12
<i>Fifth Year</i>					
PA 5	Business and Gov't	2	U 4	Business Policy	2
E 5-B	Adv. Report Writing	2	FI 12	Public Finance	2
U 5	Legal Aspects I	2	U 6	Legal Aspects II	2
IA 5	Motion & Time Study	3	IN 14	Industrial Finance	3
	Liberal Course	2½		Liberal Course	2½
C 11	Business Conference	½	C 12	Business Conference	½
		12			12

Option V Public Administration

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English	3	E 2-B	English	3
Gv 1-A	American Government	3	Gv 2-A	American Government	3
P 1-A	Surv. of Phys. Science	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography	4	Ec 2	Comm. & Ind. Hist. of U. S.	4
U 1	Legal Bases of Bus.	4	U 2	Business Associations	3
Ps 1-A	Probs. of College Life	0	PE 2	Hygiene	1
PE 3	Physical Training	0	PE 4	Physical Training	0
		18			18
<i>Second Year</i>					
E 3-B	Report Writing	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles	2	Ec 4	Economic Principles	2
FI 3	Business Finance	3	FI 4	Business Finance	3
Ps 1-B	Psychology	2	Ps 2-B	Psychology	2
AC I	Accounting I	3	AC 2	Accounting I	3
		12			12
<i>Third Year</i>					
Ec 5	Economic Problems	2	Ec 6	Economic Problems	2
FI 5	Corporation Finance	2	FI 6	Banking and Business	2
IA 1	Industrial Mgt. I.	2	IA 2	Industrial Mgt. II.	2
MA 1	Marketing Principles	3	MA 2	Marketing Problems	3
AC 3	Accounting II	3	AC 4	Accounting II	3
		12			12
<i>Fourth Year</i>					
E 13	Effective Speaking	1	E 14	Effective Speaking	1
Ec 9	Statistics in Business	2	Ec 10	Statistics in Business	2
IA 3	Personnel Adminis.	3	PA 2	Public Adminis. I.	3
Gv 5-B	Constitutional Law	3	PA 4	Political Concepts	3
	Liberal Course	3		Liberal Course	3
		12			12
<i>Fifth Year</i>					
PA 5	Business and Gov't	2	U 4	Business Policy	2
E 5-B	Adv. Report Writing	2	FI 12	Public Finance	2
U 5	Legal Aspects I.	2	U 6	Legal Aspects II.	2
PA 7	Public Adminis. II.	3	PA 8	Public Adminis. III.	3
	Liberal Course	2½		Liberal Course	2½
C 11	Business Conference	½	C 12	Business Conference	½
		12			12

Option VI Journalism

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
<i>First Year</i>					
E 1-B	English.....	3	E 2-B	English.....	3
Gv 1-A	American Government	3	Gv 2-A	American Government	3
P 1-A	Surv. of Phys. Science	4	P 2-A	Surv. of Phys. Science	4
Ec 1	Economic Geography..	4	Ec 2	Comm. & Ind. Hist. of U. S.....	4
U 1	Legal Bases of Bus....	4	U 2	Business Associations	3
Ps 1-A	Probs. of College Life..	0	PE 2	Hygiene.....	1
PE 3	Physical Training.....	0	PE 4	Physical Training.....	0
		18			18
<i>Second Year</i>					
E 3-B	Report Writing.....	2	E 4-B	Business Correspondence	2
Ec 3	Economic Principles...	2	Ec 4	Economic Principles...	2
FI 3	Business Finance.....	3	FI 4	Business Finance.....	3
Ps 1-B	Psychology.....	2	Ps 2-B	Psychology.....	2
AC 1	Accounting I.....	3	AC 2	Accounting I.....	3
		12			12
<i>Third Year</i>					
Ec 5	Economic Problems...	2	Ec 6	Economic Problems...	2
FI 5	Corporation Finance...	2	FI 6	Banking and Business	2
IA 1	Industrial Mgt. I.....	2	IA 2	Industrial Mgt. II.....	2
MA 1	Marketing Principles...	3	MA 2	Marketing Problems...	3
AC 3	Accounting II.....	3	AC 4	Accounting II.....	3
		12			12
<i>Fourth Year</i>					
E 13	Effective Speaking.....	1	E 14	Effective Speaking.....	1
Ec 9	Statistics in Business...	2	Ec 10	Statistics in Business...	2
E 9	Journalism I.....	3	E 10	Journalism I.....	3
MA 5	Advertising Principles	3	MA 6	Advertising Problems..	3
	Liberal Course.....	3		Liberal Course.....	3
		12			12
<i>Fifth Year</i>					
PA 5	Business and Gov't....	2	U 4	Business Policy.....	2
E 5-B	Adv. Report Writing...	2	FI 12	Public Finance.....	2
U 5	Legal Aspects I.....	2	U 6	Legal Aspects II.....	2
E 11	Journalism II.....	3	E 12	Journalism II.....	3
	Liberal Course.....	2½		Liberal Course.....	2½
C 11	Business Conference...	½	C 12	Business Conference...	½
		12			12

Synopses of Courses Offered

On the pages which follow are given the synopses of courses offered in the several curricula of the College. Courses offered in the first semester bear odd numbers; those offered in the second semester bear even numbers.

Freshmen courses extend over a full semester of 18 weeks. Upperclass courses are uniformly 10 weeks in length each term. The University reserves the right to withdraw any course in which there is insufficient enrolment.

Accounting

PROFESSORS D'ALESSANDRO and BRUCE; MESSRS. BLOOMFIELD and GOLEMME

AC 1 Accounting I

This course presents the fundamental principles of accounting theory and practice in a manner designed to meet the needs of students who intend to specialize in accounting as well as those who require a knowledge of accounting as a preparation for the study of banking and finance, production management, and marketing. Beginning with a consideration of the need for and the purpose served by accounting, a study of the balance sheet and operating statement is presented so that the ultimate goal and purpose of accounting is understood before the mechanical methods of recording business transactions are presented. The course then takes up specific balance sheet accounts; the law of debit and credit; the theory of nominal accounts; construction and interpretation of accounts; the recording process; the trial balance; construction of financial statements; the need for adjustments at the end of the period; depreciation; deferred and accrued items.

3 semester hour credits

AC 2 Accounting I

This course continues the work of the first semester with increased emphasis placed on accounting and interpretation of accounts. The main topics covered are closing of books, starting the new period, comparative statements, control accounts, and the operation of petty cash systems.

3 semester hour credits

AC 3 Accounting II

This course is a continuation of the fundamental principles of accounting. Greater emphasis is placed, however, on the accounting aspect of management. Special books, departmental accounts and statements, and accounting for manufacturing are specifically introduced. One of the main features of this course is the introduction of the analytical aspect of accounting.

3 semester hour credits

AC 4 Accounting II

The approach of AC 3 is continued with greater stress on the accounting rather than bookkeeping aspects. Continuity is aimed at throughout. Accounting for business organizations occupies the major part of the course. Formation and operation of partnerships and corporations are thoroughly covered. Special emphasis is placed on the valuation of partnership and corporation accounts. Problems dealing with branch accounting, installment sales, and bonds will also be studied in this course.

3 semester hour credits

AC 5 Cost Accounting

The structure of factory costs from the executive's viewpoint is studied in this course. The subject is approached chiefly from the management point of view. Problems are presented in a summarized form in order to stress the fundamental aspects of costs. Managerial control through the use of accounts is emphasized at the beginning of the course. Some of the specific topics covered are accumulation and distribution of cost data, process cost, job cost, historical cost, estimated cost, standard cost, and spoilage cost.

3 semester hour credits

AC 6 Cost Accounting

This course is designed to develop in the student the managerial ability to control production, operating, and distribution costs through the use of cost accounting and the budget. Methods of costing and controlling materials, labor, and expenses are considered in detail. Cost variations are analyzed. Joint cost and by-product cost are introduced.

3 semester hour credits

AC 7 Income Tax Accounting

In this course the fundamental principles of the application of Federal and State income taxation are presented by the problem method whereby the principles are applied to a stated set of facts. The case problems will include methods of accounting for income, sales and exchanges, installment sales, dividends, compensation for services, tax-free securities, depreciation, obsolescence, depletion, bad debts, contributions, and withholding information at the source. The social security laws are introduced.

3 semester hour credits

AC 8 *Public Accounting*

This course contemplates the application of accounting knowledge to the analysis and interpretation of accounting records. Specific cases are used for outlining the mode of procedure best adapted to the intelligent examination of accounting records and the compilation of reports on which the management can base plans for future operations. Balance sheet audits, detailed audits and special investigations for credit and other purposes receive due attention. The preparation and proper preservation of working papers is an essential feature of the course. Stress is laid on the matter of report writing and the compilation of statements and schedules that will be intelligible to the business man who is not an accountant.

3 semester hour credits

AC 9 *C.P.A. Problems*

The purpose of this course is to provide for the application of the knowledge of accounting principles and practice gained in the preceding courses to the analysis and solution of complex problems involving a recognition of the economic, legal, and social aspects of various forms of business organization. The course content consists chiefly of problems given in C.P.A. examinations. All phases of partnership, corporation, bond, depletion, and cost accounting are critically covered.

3 semester hour credits

AC 10 *C.P.A. Problems*

This course continues AC 13. Great emphasis is placed on the preparation of working papers and the taking of the C.P.A. examination. The topics covered in addition to a general review are consolidation, municipal accounting, bank accounting, brokerage accounting, adjustments of complex statements and reports, actuarial problems, and institutional accounting.

3 semester hour credits

Banking and Finance

PROFESSORS TUTHILL, LAKE, and BRUCE

FI 3 *Business Finance*

The fundamental principles of finance are approached in this course from the point of view of the business man. A study is made of the two basic ways of financing, namely, equity and borrowed funds, and their use in original and expansion financing. In addition, consideration is given to working capital requirements and the distinctions between short-term and long-term financing.

3 semester hour credits

FI 4 Business Finance

A continuation of FI 3 Business Finance. This course deals with the application of the principles of finance to such problems as surplus, dividend and reserve policies, the relation of the corporation to banks and the investing public, and the problems of both trade and economic risk. The course includes an analysis of such combinations as trusts, holding companies, consolidations, and pools from both the public and financial points of view. Analysis is also made of aspects of reorganization problems in the light of present legislation. The course concludes with an analysis of government and state agencies now supplementing private sources of business funds.

3 semester hour credits

FI 5 Corporation Finance

This course builds on the foundation of FI 3 and FI 4. The corporation, rather than business in general, is here considered. An analysis is made of the changing concepts in the corporation, such as separation of ownership and management, and the roles played by private initiative and private property. Through use of actual examples, a study is made of financial policies affecting sales, prices, markets, and control.

2 semester hour credits

FI 6 Banking and Business

Because the student taking this course has already received through his study of economics some instruction in the general principles of money and credit, particular attention is given to the bank in its relation to the business man, and the function of the Federal Reserve System as a central banking agency. An analysis is made of the more basic aspects of Federal Reserve policy as they affect business and the banking community. Current problems are carefully considered.

Pre-requisite: Ec 3

2 semester hour credits

FI 8 Advanced Banking Problems

In this course students are taught to look at the problems confronting the banker from the executive's point of view. Through a series of problems, most of which are actual cases, the matter of loan and investment policies will be studied at length with other problems concerning methods of increasing the bank's efficiency, volume of business, and profits receiving the proper amount of attention.

3 semester hour credits

FI 9 Investments

This course consists of a review of the principles of investment, a study of investment policies, and the mechanics and mathematics of investments. It includes a basic study of the advantages and disadvantages of stocks and bonds as media of investment from a present and historical basis.

3 semester hour credits

FI 10 Investments

A practical study is made of the various fields of investment such as industrials, rails, banks, real estate, government, and foreign investments. Emphasis is placed on security analysis as it pertains to the individual issues. The course not only concerns itself with an intensive study of particular companies and issues, but also includes an analysis of the various current methods of market analysis.

3 semester hour credits

FI 12 Public Finance

One of the biggest problems confronting the people of all nations today is the question of taxation. In recognition of this fact and of the enormous difficulties facing business organizations and individuals because of the tax burden, the course in Public Finance is offered. This course teaches the kinds of taxes imposed by municipal, state, and federal governing bodies. Attention is given to the "trend" in taxation. Governmental borrowings and revenues are studied as to their general effect on the finances of individuals and business concerns. A large part of the time allowed for this course is spent in a study of the sources of revenue such as commodity taxes, highway taxes, general property taxes, taxes on business, poll taxes, income taxes, and death taxes.

2 semester hour credits

FI 13 Real Estate Practice and Appraising

Consideration of land as an economic institution, and the importance of a sound land policy; the real estate man as a broker in landed property, his merchandising operations; the problems of owners and builders, the service to be rendered the ordinary purchaser; organization of the real estate office, renting, leasing, and property management; the importance of acquaintance with valuation principles; building operations, the financing of transactions, subdividing and planning; taxation, legal considerations, professional relationships.

3 semester hour credits

FI 14 Insurance Principles and Practices

The purpose of the course is to provide a comprehensive knowledge of insurance principles and coverage such as will provide a broad foundation for the student who plans to enter the business of insurance, or enable the business man to plan a satisfactory program for personal needs or business responsibilities. Content: The basic principles of insurance, solving the economic problem of risk, types of insurance contracts, legal interpretation of the insurance contract, types of insurance companies, the needs of the buyer of insurance, co-operative organizations in the field of insurance.

3 semester hour credits

Marketing and Advertising

PROFESSORS JACKSON, TATTON and FENNELL

MA 1 Marketing Principles

This course is designed to acquaint the student with the principles underlying the distribution of merchandise. Textbook assignments and lectures introduce a knowledge of the place of marketing in our modern economic order; the basic structure of markets; the main functions of marketing such as assembling, grading, storing, buying, selling and financing of goods; and the general classification of commodities into major types for the purpose of analytical study. The course gives further and more detailed consideration to the activities of the several types of middlemen such as brokers, wholesalers, and retailers, and their utilization as channels of distribution; the work of the commodity exchanges and co-operative marketing associations; and the development of chain stores, mail order houses, and department stores.

Other topics considered are market risk, pricing, selling terms and discounts, hedging, advertising, and the legal aspects of price maintenance. Supplementary lectures and illustrative material will be given to explain in some detail the methods used in marketing several specific commodities.

3 semester hour credits

MA 2 Marketing Problems

Using actual case material this course analyzes and suggests solutions to a wide variety of selling problems in typical industries and trades. It is aimed throughout to develop the analytical powers of the student so that he may decide a problem from the viewpoint of a marketing executive. Consideration is given to consumers' buying habits and buying motives, to the important

types of retail and wholesale enterprise, and to an analysis of the channels of distribution with the object of formulating a basis for selecting suitable channels for various products. The marketing of industrial goods is studied including certain special problems such as hedging. Producer's co-operative marketing is also given attention.

3 semester hour credits

MA 3 Sales Management

The study of actual case material forms the basis of this course. In each case the facts are analyzed and a solution proposed. The major problems of sales management may be stated as questions: What to sell? To whom shall products be sold? At what price and terms shall products be sold? The answering of these questions involves a consideration of merchandising policies and organization, market channels, market research and analysis, and pricing and credit policies.

3 semester hour credits

MA 4 Sales Management

Continuing BU 7 Problems in Sales Management this course deals primarily with the following problems: sales methods, sales promotion, sales campaigns, management of sales force, and the planning and control of sales operations.

In the field of Sales Management the solution of problems involves two types of mental effort. First, there is the suggestion of plans or alternatives, a task requiring imagination; second, there is the choice between the alternatives so suggested, a matter of judgment. It is essential that the student of business management acquire the habit of weighing alternatives before deciding, but much more is to be gained if the student possesses and develops imagination.

The purpose of the courses in Sales Management is principally to develop an approach and technique for the solution of problems, so the student will be able to analyze and think through the problems which must be faced later when he arrives at a post of responsibility.

3 semester hour credits

MA 5 Advertising Principles

The purpose of this course is to acquaint the student with the fundamental principles and facts which the advertising man must know today. The economic background of the subject and its development is presented, together with a survey of the methods for planning and preparing advertisements actually followed in advertising offices. Consideration is given to human instincts, buying habits, argumentative and suggestive appeals; color, headlines, layout, illustrations, and trademarks.

3 semester hour credits

MA 6 *Advertising Problems*

The analysis and solution of a wide variety of advertising problems and cases based upon the actual business experience of a large number of firms constitutes the content of this course.

3 semester hour credits

MA 7 *Retail Merchandising*

The purpose of this course is to study the principles of successful retailing and to solve actual problems involving these principles. Layout, location and equipment of retail stores are first considered. Store organization, market contacts, buying, receiving and marking merchandise, and invoice procedure are taken up next. Mark-up and mark-down are dealt with in detail through practical examples requiring solution by the students, as are inventory and stock control methods. Merchandise planning is discussed and illustrated.

3 semester hour credits

MA 8 *Retail Merchandising*

This course continues the work of Retail Merchandising, dealing with expense distribution, retail credits and collections, and with special phases of retail accounting. Other topics considered are: fashion, salesmanship, customer service, and the training and welfare of employees. The promotion of sales events and retail advertising practices are analyzed from the viewpoint of the store executive.

3 semester hour credits

Industrial Administration

DEAN KNOWLES, PROFESSORS ALEXANDER and THOMSON;
MR. GOLEMME

IA 1 *Industrial Management I*

The course in industrial management places emphasis on the administrative and profit making phases of factory and plant operation. A textbook is used to present elementary principles and problem material which are supplemented by lectures.

The first part of the course presents a brief historical background of U. S. industry; this is followed by a treatment of the location of the plant; plant services and material handling; plant design, structure, and layout; standardization, simplification, and specialization.

2 semester hour credits

IA 2 *Industrial Management II*

This course is a continuation of Industrial Management IA 1. It deals with the control of plant operations. Each department of a modern industrial concern is considered, emphasis being placed on the organization and management problems confronted and how they may be handled, with the intention that the student shall become familiar with the activities and general working of each department and the relationship which the departments hold to one another and to the business as a whole. In detail are considered: budgeting, standards of performance (time and motion study, wage systems), organization, routing, scheduling, dispatching, inventory control, quality control, and visual controls such as the organization chart, planning board, and departmental report.

2 semester hour credits

IA 3 *Personnel Administration*

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scale, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans, employee representation, collective bargaining, and management relationships are given attention.

Provisions of the National Labor Relations Act and the Wages and Hours Act are discussed.

3 semester hour credits

IA 4 *Personnel Problems*

This course brings to the attention of the student an understanding of the related, yet varied, problems with which the modern personnel department is confronted. These include problems of guidance, placement, job evaluation, adjustment of rates, employee rating systems, development of complete, yet simple, personnel records, etc.

3 semester hour credits

IA 5 *Motion and Time Study*

This course comprises a detailed study of time and motion study work, a complete study and actual practice in micromotion which is the use of motion pictures in the motion study work, a preparation of simo-charts (the use of colored charts and symbols called

Therbligs which show all the elements in an operation cycle), and the making of process charts which is the use of specifically designed symbols, or industrial shorthand, to record motion analysis.

3 semester hour credits

IN 14 Industrial Finance

The early part of this course consists of a study of internal management problems and methods of determining profit trends thru use of profit and capital graphs. The latter half of the course is given to a brief survey of the existing forms of finance with particular emphasis upon external trends that affect seriously the problems of corporate management.

3 semester hour credits

Public Administration

PROFESSORS POTTER and HAMILTON and MR. LARSON

PA 2 Public Administration I

A study of career service of the local, state, and national government; the administrative positions in career service; the information needed by the government administrator in order to function effectively; and the means for acquiring public administration knowledge.

3 semester hour credits

PA 4 Political Concepts

A critical study is made of the major developments in political theory since Bentham with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

3 semester hour credits

PA 5 Business and Government

The object of this course is to develop a thorough understanding of the relationships between government and business. The attitude of our government towards business since 1885 as evidenced by legislative, judicial, and executive action will be analyzed in detail. Careful attention will be given the experience under the NRA and the attempts on the part of government and business to preserve the good features of the codes. Special consideration will be given to the part played by the administrative agency.

2 semester hour credits

PA 7 Public Administration II

A study of the subject matter and principles of management necessary for the efficient operation of the government.

3 semester hour credits

PA 8 Public Administration III

This course presents a study of the public relations, fiscal control, and policy making aspects of public administration, stressing the importance of co-operation among government bureaus, legislative bodies, and the public; and presents to the student an appreciation of the importance of versatility of ability for a successful public career.

3 semester hour credits

Journalism

PROFESSORS MELVIN, MARSTON, and MR. CLONEY

E 9 Journalism I

The newspaper technique, with practice in rewriting; the general tasks of an "inside" man and the functions of the editorial department.

3 semester hour credits

E 10 Journalism I

The problems of reporting and newswriting, with written assignments in all types of spot news reporting.

3 semester hour credits

E 11 Journalism II

Editing the news. The writing of editorials, feature articles, and columns.

3 semester hour credits

E 12 Journalism II

A general practice course in newspaper writing, the covering of special assignments, and editorial problems.

3 semester hour credits

English

PROFESSORS MELVIN, HOLMES and MARSTON;
MESSRS. NORVISH, CAPON and CLONEY

E 1-B English

A course in composition with emphasis on the basic principles of writing. A brief, comprehensive review of grammar and rhetoric precedes the study of exposition. Works of contemporary essayists and biographers are used as models for weekly themes and studied as examples of modern literature.

3 semester hour credits

E 2-B English

A continuation of E 1-B, with a study of contemporary short stories, plays, and poems. Toward the end of the term a careful study of letter writing is made.

3 semester hour credits

E 3-B Report Writing

In recognition of the importance to business men of clear and concise written expression in daily business contacts, this course places emphasis on up-to-date business practices. Actual reports used in industry are presented for class study and criticism. The report form, the use of illustrations, exhibits, and charts, the purposes and qualities of a good report are derived from an examination of current models. In addition, the course considers such forms of business writing as the memorandum, instruction data, the company magazine and bulletin, minutes of meetings, recommendations and suggestions, and manuals of company practice and procedure.

2 semester hour credits

E 4-B Business Correspondence

Too great an importance cannot be attached to effective and correct business letters as essential to the successful conduct of any business. This course gives consideration of the basic principles of business letter writing with particular reference to the form of the letter, the letter writer's point of view, natural language, dictation. Routine business letters — inquiry, order, complaint, adjustment, credit, collection letters, and letters of application — will be analyzed and discussed. The problems of selling by mail will be briefly examined.

2 semester hour credits

E 5-B Advanced Report Writing

An advanced study of current practices in industrial report writing will be the purpose of this course. The emphasis will be placed equally upon matter and form so that professional proficiencies may be correlated with effective presentation.

2 semester hour credits

E 13 Effective Speaking

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction is planned to eliminate defects of voice, posture, and delivery, and to develop in the student an ability to speak easily, naturally, and forcefully.

1 semester hour credit

E 14 Effective Speaking

Continued practice in impromptu and extempore speaking, organization of material, consideration of the audience, and vocabulary building form the basis of the course.

1 semester hour credit

Economics

PROFESSORS LAKE and HAMILTON; MR. CRUICKSHANK

Ec 1 Economic Geography

In order to provide an adequate background for the study of economics this first course emphasizes the economic resources of our country and the part played by these resources in the development of our modern industrial society. The course is more concerned with promoting the comprehension of basic concepts than with stressing encyclopedic knowledge of masses of details. In the latter part of the semester frequent use is made of motion pictures to illustrate the processes and peculiar economic characteristics of specific industries.

4 semester hour credits

Ec 2 Commercial and Industrial History of the U. S.

This course is designed to complete the factual background which is needed for the most successful study of theoretical economics. The economic development of the United States is traced from the colonial period to the present with special emphasis upon the period since the Civil War. Stress is laid upon the importance of economic factors and changes in our history in the description of

the development of manufacturing, agriculture, domestic and foreign commerce, finance and banking, transportation and labor organizations. Consideration is given to European developments which have been closely related to those of the United States.

4 semester hour credits

Ec 3 Economic Principles

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include: the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

2 semester hour credits

Ec 4 Economic Principles

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

2 semester hour credits

Ec 5 Economic Problems

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include consumption, protective tariffs and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

2 semester hour credits

Ec 6 Economic Problems

A continuation of Ec 5 Economic Problems. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including the control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

2 semester hour credits

Ec 9 Statistics in Business

This course is intended to give the student an understanding of statistical principles and methods and their practical application in the administration of modern business. A study is made of the nature, sources, collection and organization of business facts;

the presentation of such facts in tabular or graphic form, the various averages, measures of dispersion, and the construction and use of index numbers. Laboratory periods provide an opportunity for each student to demonstrate his ability to apply the principles studied.

2 semester hour credits

Ec 10 Statistics in Business

The major portion of this continuation of Ec 9 Statistics in Business concerns the analysis of time series and includes the methods of obtaining trends, seasonal indexes, and the measurement of cyclical variation. Correlation of time series is related to the problems of business forecasting. In the laboratory work each student is required to make a complete analysis of an individual time series, preferably associated with his co-operative work.

2 semester hour credits

Government

PROFESSOR POTTER; MESSRS. LARSON and KEITH

Gv 1-A American Government

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative and judicial machinery under the party system of government and bureaucracy.

3 semester hour credits

Gv 2-A American Government

A more careful study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative and judicial functions of government in a democratic country.

3 semester hour credits

Gv 5-B Constitutional Law

A careful study of the leading constitutional principles of the American government as developed through judicial interpretation. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "interstate commerce."

3 semester hour credits

Psychology

PROFESSOR ESTES

Ps 1-A Problems of College Life

This course is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency and mental health in the college environment.

Ps 1-B Psychology

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

2 semester hour credits

Ps 2-B Psychology

An introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

2 semester hour credits

Other Required Courses

PE 2 Hygiene

One class hour a week is devoted to the study of information closely related to the physical training work and to personal and mental hygiene. For each class lecture the student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

1 semester hour credit

PE 3-4 Physical Training

All first-year students are required to take physical training. Health, strength, and vitality do not come by chance, but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of life.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects,

participation in the regular athletic program, including baseball, basketball, hockey, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from physical training, because of physical defects, are required to present a petition to the faculty supported by a physician's certificate.

U 1 Legal Bases of Business

A survey course presenting the fundamental principles of business law and their relationships to the operations of business enterprise. Since practically every phase of business activity from the organization to the dissolution of a concern rests on a foundation of law, it is essential that the student of business understand the rudimentary legal principles involved. Major topics covered include contracts, agency, negotiable instruments, sales, bailments, carriers, insurance law, suretyship, and bankruptcy.

4 semester hour credits

U 2 Business Associations

This course deals with the legal, economic, and human phases of business organizations. It discusses the individual proprietorship, partnership, corporation, and business trust, showing how each is formed, operated, and dissolved. The merits, as well as the shortcomings, of each form are treated. Specific problems will deal with the legal requirements, organization expense, operating problems, taxes, and reports required of each of these types of organizations.

3 semester hour credits

U 4 Business Policy

This course is set up as a seminar in which the members of the class will examine the problems that the business man faces daily in his relations with government, labor, the market, and the community. The ethical features of business policy formation will be stressed along with the social implications. An attempt will be made to determine the criteria by which fair business practices can be distinguished from unfair.

2 semester hour credits

U 5 Legal Aspects I

This course covers the law of contracts and the law of agency as they effect the business man. Under the law of contracts such subjects are considered as agreements, competent parties, consideration legality, assignment, discharge of contracts, enforce-

ment of contracts, and damages for breach. Under the law of agency there is discussion of the formation of the agency relationship, rights, and duties of the principal and the agent, rights of third parties and termination of agency.

2 semester hour credits

U 6 Legal Aspects II

This course deals chiefly with the subject of negotiable instruments. The widespread use of credit instruments in commercial transactions demands a knowledge of the law of bills and notes on the part of the business man. The various types of instruments are first discussed, the requirements for negotiability, the negotiation by endorsements of various kinds, the rights of holders in due course, the rights and liabilities of other parties, the requisites for charging secondary parties, and methods of discharge. Consideration is given the law of sales, including such topics as the passing of title to goods conditions and warranties, the Statute of Frauds, rights and remedies of buyers and sellers.

2 semester hour credits

P 1-A Survey of Physical Science

The purpose of the course is to give a definite conception of the physical world to those students who ordinarily would not elect a science course but who need to know something about the contributions and the place of the physical sciences in contemporary civilization. This course begins with a study of the universe and solar system. Consideration is given to the principles of distance, mass and weight, and the simple dynamics of bodies. The earth is studied from the viewpoint of its geological, meteorological, and chemical aspects, these main fields introducing a non-mathematical discussion of magnetism, heat, and electricity.

4 semester hour credits

P 2-A Survey of Physical Science

In this course, which continues P 1-A, the phenomena of light are taken up. Following this, consideration is given to spectroscopy and matter structure, the periodic table, acids, bases, salts, and organic compounds. The course concludes with a discussion of certain aspects of physics which are of practical importance in the household, such as heating, lighting, refrigeration, and electrical appliances.

4 semester hour credits

C 11 Business Conference

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in class those students who have been placed and supervised on co-operative work by him. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandising. Prominent men who are leaders in the fields of employment counselling, business, or engineering present the employers' viewpoint. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services," thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

½ semester hour credit

C 12 Business Conference

This course is the sequel to C 11 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course will culminate in the attainment by each student of his after-graduation job.

½ semester hour credit

Business Administration Theses

A thesis in the College of Business Administration is considered to be an essay involving the statement, analysis, and solution of some problem in a special field of business administration. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of the candidate. A mere resume of existing knowledge in some subject is not acceptable. This, it is true, must usually be made, but in addition thereto the student must show his ability to deal constructively with the data he has collected and his power to draw significant and reliable conclusions from his investigations. The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the Departments interested and then forwarded to the Secretary of the Day Division. Final approval of the thesis rests with the Dean. When it is accepted, the thesis becomes the property of the school and it is not to be printed, published, nor in any other way made public except in such manner as the Department and the Dean shall jointly approve.

Theses are not required of seniors in the College of Business Administration. To certain students who wish to do so, however, the privilege of writing a thesis may be granted by the Dean in accordance with the following regulations:

1. To be eligible to write a thesis a student must have attained a scholastic average of at least 2.0 or better during his middler year and the first half of his junior year.

2. Students who have met this minimum requirement may petition the Dean for the privilege of substituting a thesis for any one of the required courses of the fifth year.

3. In his petition the student must state the subject which he proposes to investigate and give a brief statement of the purpose and scope of the proposed thesis.

4. Petitions for the privilege of writing theses must be submitted in writing to the Dean not later than the middle of the second college period of the junior year.

Liberal Electives

In addition to the prescribed courses in each curriculum, students may elect one liberal arts course in each of the last two years. These liberal electives may be chosen from courses offered by the College of Liberal Arts as listed hereafter, provided they are scheduled at a time when the students are free to take them.

Ec 11 Labor Problems

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. The attitude of our government toward these problems and its attempts to handle them are analyzed carefully. The suggestions of other groups and agencies in respect to these problems will be treated, e.g., co-operative movement, socialism.

Ec 12 Economic Systems

This is an intensive analysis of alternative economic systems. Various criteria for evaluating the different systems are developed.

Pre-requisite: Ec 5, Ec 6

Ec 13 Business Cycles

After a study of the conditions which underlie cyclical fluctuations in prices, volume of trade, physical production, and employment, a careful analysis is made of the more significant theories of the business cycle. The possibilities of controlling such fluctuations and of initiating recovery receive extended attention. Throughout the course emphasis is placed upon the current phase of the business cycle and its peculiar problems.

Pre-requisite: Ec 5, Ec 6

Ec 14 International Economic Relations

A careful examination of the important principles of international trade and finance precedes a critical survey of the international commercial policies of modern nations, with special reference to the United States. Such broader problems as the international control of raw materials, exchange restrictions, international cartels and the economic activities of the League of Nations and other international organizations are considered.

Pre-requisite: Ec 5, Ec 6

Ec 15 History of Economic Thought

A critical review of the origin and development of economic thought from the ancient world to modern times is the aim of this course, since familiarity with the efforts of great economic thinkers in the past is essential for the thorough understanding of modern economic theory. After briefly noting the contributions of Plato and Aristotle, the early Christian fathers, and the writers of the Middle Ages, each of the main schools of economic thought is taken up in turn: the Mercantilists, the Physiocrats, the Classical School, the Socialists, the Historical School, the Austrian School, and Alfred Marshall.

Pre-requisite Ec 5, Ec 6

Ec 16 Advanced Economic Theory

The course introduces the student to the more complex aspects of economic theory. Particular consideration is given to the major modern theoretical problems.

Pre-requisite: Ec 15

E 15 Survey of English Literature

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

E 16 Survey of English Literature

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

E 19 Shakespeare

An introduction to the work of Shakespeare. The Elizabethan period, Shakespeare's London, the Elizabethan stage and audience, and the plays of Shakespeare's contemporaries will be discussed in lectures. Five plays will be studied.

E 20 Shakespeare

Lectures will be given on Shakespearean grammar, the text of Shakespeare, editors' problems, etc. Four plays will be carefully analyzed.

E 25 American Literature to 1860

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

E 26 American Literature After 1860

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

Gv 3 Municipal Government

This course is a study of the machinery of city government in the United States, treating specifically the growth of the American city, the duties and powers of the municipal corporation, the organs of municipal government and their interrelations, and an analysis of the frame-work and functionalizing mechanism of municipal organization.

Gv 4 Comparative Government

A course which presents the processes and institutions by which government is being attained in the leading nations of the world. The course is designed to give breadth of view and develop a sympathetic appreciation of what people of other races and nationalities are doing to meet the demands of modern society.

Gv 5 American Constitutional Law

Following a careful study of the influences affecting the framing of the Constitution, attention is turned to the leading constitutional principles of the American government as developed through judicial interpretation.

Gv 6 American Constitutional Law

A continuation of Gv 5. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "inter-state commerce".

Gv 7 Origins of Political Theory

A survey of political philosophy from Plato and Aristotle to Bentham. The nature, origin, forms, and ends of the state and government are covered.

Gv 8 Modern Political Theory

A critical study is made of the major developments in political theory since Bentham with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

H 5 Europe, 1789-1870

This course aims at describing and interpreting the development of European states from the French Revolution to 1870. Major topics include the Metternich system, the emergence of French Republicanism, and the unification of Italy and Germany. Non-political factors receive much attention throughout the course.

H 6 Europe, 1870-1938

The international relationships which precipitated the tragedy of 1914 are considered. The rise of militarism and nationalism, secret diplomacy, propaganda and the press, the "incidents" which led to the World War, the conduct of the war, the peace treaties, and the rise of socialism and fascism are discussed in this course.

H 9 The United States to 1865

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected even though the political history is stressed.

H 10 The United States Since 1865

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

Ps 7 Social Psychology of Everyday Life

A course devoted to the psychological examination of some of the phenomena observable in everyday social life. These include customs, crazes, fashions, rumor, propaganda, crowds, leadership, competition, and co-operation.

Ps 8 Social Psychology, Theory, and Methods

A survey of the field of social psychological theory and an examination of the experimental technique utilized in this field of psychology. Special emphasis is placed upon attitudes and their measurement.

S 3 Social Problems

Attention is given the nature, complex causation, and inter-relatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

S 4 Social Pathology

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group.

Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

S 7 Principles of Social Ethics

To understand more clearly the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments be compatible with one's best reflective thought.

S 9 Problems in Social Ethics

Problems arising from differences in moral standards found in the various social groups will be examined. The question of ethical relativism and determinism will be considered. A selected number of specific problems in social ethics will be discussed.

S 10 Social Progress

The historical development of the theory of progress, contemporary concepts of social progress, the agents of progress, and the phenomenon of regression are several of the subjects for study. The course is based on Hertzler's *Social Progress*, supplemented with lectures and collateral readings.

S 11 Social Control

The methods by which social forces are controlled is the fundamental question with which the course deals. External and internal types of control of the social organism are discussed. The use of violence, the power of public opinion, and the application of certain principles of social psychology are examined.

S 16 Urban Sociology

Upon studying the complex human society found in the various cities of the world, this course then turns to an analysis of the modern American city. Its types, social values, and pathological elements are discussed. Methods of city planning are considered. The belief on the part of some sociologists that democracy is doomed by its cities is examined in the light of typical problems of urban society.

NORTHEASTERN UNIVERSITY

DAY DIVISION

Courses of Instruction

1940-1941

Course Number	Course	Semester Hours
ACCOUNTING		
AC 1	Accounting I.....	3
AC 2	Accounting I.....	3
AC 3	Accounting II.....	3
AC 4	Accounting II.....	3
AC 5	Cost Accounting.....	3
AC 6	Cost Accounting.....	3
AC 7	Income Tax Accounting.....	3
AC 8	Public Accounting.....	3
AC 9	C.P.A. Problems.....	3
AC 10	C.P.A. Problems.....	3
BANKING AND FINANCE		
FI 3	Business Finance.....	3
FI 4	Business Finance.....	3
FI 5	Corporation Finance.....	2
FI 6	Banking and Business.....	2
FI 8	Advanced Banking Problems.....	3
FI 9	Investments.....	3
FI 10	Investments.....	3
FI 12	Public Finance.....	2
FI 13	Real Estate Practice & Appraising....	3
FI 14	Insurance Principles & Practices.....	3
MARKETING AND ADVERTISING		
MA 1	Marketing Principles.....	3
MA 2	Marketing Problems.....	3
MA 3	Sales Management.....	3
MA 4	Sales Management.....	3
MA 5	Advertising Principles.....	3
MA 6	Advertising Problems.....	3
MA 7	Retail Merchandising.....	3
MA 8	Retail Merchandising.....	3
INDUSTRIAL ADMINISTRATION		
IA 1	Industrial Management I.....	2
IA 2	Industrial Management II.....	2
IA 3	Personnel Administration.....	3
IA 4	Personnel Problems.....	3
IA 5	Motion & Time Study.....	3
IN 14	Industrial Finance.....	3

Courses of Instruction

Course Number	Course	Semester Hours
PUBLIC ADMINISTRATION		
PA 2	Public Administration I.....	3
PA 4	Political Concepts.....	3
PA 5	Business and Government.....	2
PA 7	Public Administration II.....	3
PA 8	Public Administration III.....	3
JOURNALISM		
E 9	Journalism I.....	3
E 10	Journalism I.....	3
E 11	Journalism II.....	3
E 12	Journalism II.....	3
ENGLISH		
E 1-B	English.....	3
E 2-B	English.....	3
E 3-B	Report Writing.....	2
E 4-B	Business Correspondence.....	2
E 5-B	Advanced Report Writing.....	2
E 13	Effective Speaking.....	1
E 14	Effective Speaking.....	1
ECONOMICS		
Ec 1	Economic Geography.....	4
Ec 2	Commercial and Industrial History of the U. S.....	4
Ec 3	Economic Principles.....	2
Ec 4	Economic Principles.....	2
Ec 5	Economic Problems.....	2
Ec 6	Economic Problems.....	2
Ec 9	Statistics in Business.....	2
Ec 10	Statistics in Business.....	2
GOVERNMENT		
Gv 1-A	American Government.....	3
Gv 2-A	American Government.....	3
Gv 5-B	Constitutional Law.....	3
PSYCHOLOGY		
Ps 1-A	Problems of College Life.....	0
Ps 1-B	Psychology.....	2
Ps 2-B	Psychology.....	2
OTHER REQUIRED COURSES		
PE 2	Hygiene.....	1
PE 3-4	Physical Training.....	0
U 1	Legal Bases of Business.....	4
U 2	Business Associations.....	3
U 4	Business Policy.....	2

Courses of Instruction

Course Number	Course	Semester Hours
OTHER REQUIRED COURSES (Continued)		
U 5	Legal Aspects I.....	2
U 6	Legal Aspects II.....	2
P 1-A	Survey of Physical Science.....	4
P 2-A	Survey of Physical Science.....	4
CO-ORDINATION		
C 11	Business Conference.....	1½
C 12	Business Conference.....	1½
LIBERAL ELECTIVES*		
Ec 11	Labor Problems.....	
Ec 12	Economic Systems.....	
Ec 13	Business Cycles.....	
Ec 14	International Economic Relations.....	
Ec 15	History of Economic Thought.....	
Ec 16	Advanced Economic Theory.....	
E 15	Survey of English Literature.....	
E 16	Survey of English Literature.....	
E 19	Shakespeare.....	
E 20	Shakespeare.....	
E 25	American Literature to 1860.....	
E 26	American Literature after 1860.....	
Gv 3	Municipal Government.....	
Gv 4	Comparative Government.....	
Gv 5	American Constitutional Law.....	
Gv 6	American Constitutional Law.....	
Gv 7	Origins of Political Theory.....	
Gv 8	Modern Political Theory.....	
H 5	Europe, 1789-1870.....	
H 6	Europe, 1870-1938.....	
H 9	The U. S. to 1865.....	
H 10	The U. S. since 1865.....	
Ps 7	Social Psychology of Everyday Life.....	
Ps 8	Social Psychology, Theory and Methods.....	
S 3	Social Problems.....	
S 4	Social Pathology.....	
S 7	Principles of Social Ethics.....	
S 9	Problems in Social Ethics.....	
S 10	Social Progress.....	
S 11	Social Control.....	
S 16	Urban Sociology.....	

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OFFICE HOURS
DEPARTMENT OF ADMISSIONS
9 A.M. to 4 P.M. daily
Saturday 12.00 N'N
Wednesday Evenings by
Appointment

Northeastern University

College of Business Administration

Paste a Small
Photo or
Snapshot
in This Space

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass. 19

To Director of Admissions:

I (Name in full)
hereby respectfully apply for admission to the College of Business
Administration to major in the field checked:

- | | |
|--|--|
| <input type="checkbox"/> Accounting | <input type="checkbox"/> Industrial Administration |
| <input type="checkbox"/> Banking and Finance | <input type="checkbox"/> Public Administration |
| <input type="checkbox"/> Marketing and Advertising | <input type="checkbox"/> Journalism |
| | <input type="checkbox"/> Pre-legal |

for the school period beginning 19....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence Street

Town or City.....

State..... Tel.....

Date of Birth..... Age.....

Place of Birth.....

Race..... Religion..... Nationality.....

Graduate of..... High School, Year.....

Location of High School.....

Name of Principal.....

Other high schools you have attended.....

Names of Principals.....

If not a graduate, state the years of attendance and why you left.....

Father's, Mother's, or Guardian's Name.....

Address.....

Father's work, business or profession.....

Names and addresses of two other persons, to whom we may direct inquiries concerning you.
.....
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Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

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Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

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Name of person who will furnish transcript of your college record.....

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Do you expect advance credit for past collegiate work?.....

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List all athletics and other extra curricula high school activities you have engaged in.....

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Names and addresses of all past employers with brief description of each job, length of employment, and wages received:.....

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Date.....

Milton J. Schlagenhauf, Director of Admissions
Northeastern University
360 Huntington Avenue
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

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.....

Name.....

Street and Number.....

Town or City.....

State.....

NORTHEASTERN UNIVERSITY

SCHOOL OF LAW

1940-1941



Day and Evening Programs

Admits Men and Women

FORTY-THIRD YEAR

OFFICE HOURS

JUNE 20, 1940 — AUGUST 15, 1940

Daily (except Saturdays and Sundays) 8:45 A.M.-5:00 P.M.

Saturdays, 8:45 A.M.-12:00 M.

AUGUST 16, 1940 — JUNE 19, 1941

Daily (except Saturdays and Sundays) 8:45 A.M.-9:00 P.M.

Saturdays, 8:45 A.M.-1:00 P.M.

During September, the Office is open all day Saturday.

The General Offices of the University are open from 9:00 A.M. to 9:00 P.M. the entire year.

LIBRARY HOURS

JULY 1 — SEPTEMBER 7, 1940

Daily (except Saturdays and Sundays) 8:45 A.M.-5:00 P.M.

Saturdays, 8:45 A.M.-1:00 P.M.

SEPTEMBER 9, 1940 — JULY 1, 1941

Daily (except Sundays) 8:45 A.M.-10:00 P.M.

Sundays, 3:00 P.M.-8:00 P.M.

Holidays, 12:00 M.-6:00 P.M.

COMMUNICATIONS SHOULD BE ADDRESSED TO

NORTHEASTERN UNIVERSITY

SCHOOL OF LAW

47 MT. VERNON ST., BOSTON, MASS.

TELEPHONE KENMORE 5800

NORTHEASTERN UNIVERSITY

The Forty-third Annual Catalogue
of the
School of Law

THREE-YEAR DAY PROGRAM
FOUR-YEAR EVENING PROGRAM
EACH PROGRAM LEADS TO THE LL.B. DEGREE

TWO-YEAR EVENING GRADUATE PROGRAM
LEADING TO THE LL.M. DEGREE

1940-1941



[*Case Method of Instruction*]
[*High Scholastic Standards*]
[*Sound Professional Ideals*]

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CALENDAR

DAY CLASSES

1940-1941

FIRST SEMESTER

1940

16 Sept.	Monday	Registration begins.
23 Sept.	Monday	Class lectures begin.
18 Nov.	Monday	Payment of second installment of tuition due.
27 Nov.	Wednesday	1:10 P.M. Thanksgiving recess begins.
2 Dec.	Monday	9 A.M. Classes resumed.
20 Dec.	Friday	1 P.M. Christmas recess begins.

1941

6 Jan.	Monday	9 A.M. Classes resumed.
24 Jan. — 1 Feb.		First semester examinations.

SECOND SEMESTER

1941

3 Feb.	Monday	9 A.M. Class lectures begin.
3 Feb.	Monday	Payment of third installment of tuition due.
24 March	Monday	Payment of final installment of tuition due.
4 April	Friday	1:10 P.M. Spring vacation begins.
14 April	Monday	9 A.M. Classes resumed.
26 May — 7 June		Final examinations.

EVENING CLASSES

1940-1941

1940

9 Sept.	Monday	Senior, Junior and Sophomore class lectures begin.
23 Sept.	Monday	Freshman class lectures begin.
18 Nov.	Monday	Payment of second installment of tuition due.
28 Nov.	Thursday	Legal holiday (classes omitted).
20 Dec.	Friday	Last class lectures before the Christmas recess.

1941

6 Jan.	Monday	First class lectures following the Christmas recess.
27 Jan.	Monday	Payment of third installment of tuition due.
24 March	Monday	Payment of final installment of tuition due.
30 May	Friday	Legal holiday (classes omitted).
15 June	Sunday	Baccalaureate Address.
16 June	Monday	Commencement.

THE NORTHEASTERN UNIVERSITY CORPORATION

ROBERT GRAY DODGE

Chairman

FRANK LINCOLN RICHARDSON

Vice-Chairman

CARL STEPHENS ELL

President of the University

GALEN DAVID LIGHT

Secretary and Treasurer

CHARLES FRANCIS ADAMS	ARTHUR STODDARD JOHNSON
WILMAN EDWARD ADAMS	HALFDAN LEE
ROGER AMORY	EDWARD ABBOTT MACMASTER
EARL D. BABST	JOHN RUSSELL MACOMBER
ROBERT BALDWIN	JOSEPH PATRICK MANNING
ARTHUR ATWOOD BALLANTINE	HAROLD FRANCIS MASON
GEORGE LOUIS BARNES	JAMES FRANKLIN McELWAIN
THOMAS PRINCE BEAL	HUGH DEAN McLELLAN
FARWELL GREGG BEMIS	FRED LESTER MORGAN
PAUL CODMAN CABOT	IRVING EDWIN MOULTROP
WINTHROP L. CARTER	CLARENCE LUCIAN NEWTON
WALTER CHANNING	OLAF OLSEN
WILLIAM CONVERSE CHICK	AUGUSTIN HAMILTON PARKER, JR.
EVERETT AVERY CHURCHILL	GEORGE EDWIN PIERCE
PAUL FOSTER CLARK	ROGER PIERCE
SEARS B. CONDIT	MATTHEW POROSKY
ALBERT MORTON CREIGHTON	FREDERICK SANFORD PRATT
ERNEST BLANEY DANE	HARRY WENDELL PROUT
WILLIAM JAMES DAVIDSON	SIDNEY RABINOVITZ
JAMES DEAN	STUART CRAIG RAND
HENRY STURGIS DENNISON	JAMES LORIN RICHARDS
PAUL AUGUSTUS DRAPER	CHARLES MILTON ROGERSON
CHARLES FRANCIS EATON	ROBERT BILLINGS RUGG
LINDSAY ELLMS	LEVERETT SALTONSTALL
JOSEPH BUELL ELY	FRANK PALMER SPEARE
FREDERIC HAROLD FAY	RUSSELL HENRY STAFFORD
ALLAN FORBES	FRANCIS ROBERT CARNEGIE STEELE
EDWARD J. FROST	CHARLES STETSON
FRANKLIN WILE GANSE	EARL PLACE STEVENSON
GEORGE PEABODY GARDNER, JR.	ROBERT TREAT PAINE STORER
HARVEY DOW GIBSON	FRANK HORACE STUART
MERRILL GRISWOLD	EDWARD WATSON SUPPLE
HENRY INGRAHAM HARRIMAN	BAYARD TUCKERMAN, JR.
CHANDLER HOVEY	ELIOT WADSWORTH
HOWARD MUNSON HUBBARD	EDWIN SIBLEY WEBSTER
MAYNARD HUTCHINSON	SINCLAIR WEEKS

NORTHEASTERN UNIVERSITY

GENERAL STATEMENT

NORTHEASTERN University is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

- Co-operative Education by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools—The Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges—the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the Evening Division of the College of Liberal Arts. The School of Business has curricula in Management—with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of Liberal Arts offers certain of its courses during evening hours constituting a program, three years in length, equivalent in hours to one-half

the requirements for the A.B. or S.B. degree and providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thorough going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

NORTHEASTERN UNIVERSITY AND AFFILIATED SCHOOLS

STATISTICAL SUMMARY

1938-1939

	Administrative Officers and Faculty	Students
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	103	2112
College of Engineering		
College of Business Administration		
School of Law		
School of Business	50*	1461*
Evening Courses of College of Liberal Arts	105*	1550*
	4**	33**
III. Schools affiliated with and conducted by		
Northeastern University:		
Lincoln Technical Institute	38	532
Lincoln Preparatory School	19	437
Huntington Day School for Boys		
Regular Term	16	171
Summer Term	10	146
	-----	-----
Total	353	6442
Less Duplicates	42	403
	-----	-----
	311	6039

*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

**The Evening Courses of the College of Liberal Arts admitted students for the first time in September, 1938.

SCHOOL OF LAW

ADMINISTRATIVE STAFF

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D., *President of the University*
FRANK PALMER SPEARE, M.H., LL.D., *President Emeritus*
EVERETT AVERY CHURCHILL, A.B., Ed.D., *Vice President of the University*
GALEN DAVID LIGHT, A.B., *Secretary-Treasurer of the University*
SYDNEY KENNETH SKOLFIELD, A.B., B.R.E., LL.M., *Dean*
KENNETH STEVENSON, B.C.S., *Assistant to the Vice President*

EDNA ETHEL RAWNSLEY, *Registrar and Secretary to the Dean*
SEVA JEANNE KOZITZKY, M.A., B.S., *Librarian*
MARY B. FOOR, *Manager of the University Bookstore*
DAISY MILNE EVERETT, *Assistant Treasurer*
ELLEN WHITEHOUSE PARKINSON, *Bookkeeper*
ISABEL CRAIG RAMSAY, *Recorder*
ELIN VICTORIA PETERSON, *Secretary to the Vice President*
MABEL ELLEN BEAN, *Secretary to the Assistant to the Vice President*

FACULTY

FELIX FORTE, A.M., LL.M., S.J.D.
Professor of Law
EDWIN WILSON HADLEY, A.B., J.D., LL.M.
Professor of Law
SYDNEY KENNETH SKOLFIELD, A.B., B.R.E., LL.M.
Dean and Professor of Law
CHARLES FREDERICK FRASER, A.M., LL.M.
Associate Professor of Law
DONALD ROBERT SIMPSON, A.B., LL.B.
Assistant Professor of Law
CHALMERS ADDISON PEAIRS, JR., M.A., LL.M.
Instructor in Law

ARTHUR WILLIS BLACKMAN, B.A., LL.B.
Lecturer in Equity
ROBERT RAYMOND ELLIOTT, B.S., LL.B.
Lecturer in Criminal Law
ELIAS FIELD, A.B., LL.B.
Lecturer in Real Property
DANA TAYLOR GALLUP, A.M., LL.B.
Lecturer in Taxation

HAROLD PENDEXTER JOHNSON, A.B., LL.B.
Lecturer in Mortgages, and Future Interests

RICHARD HENRY LEE, A.B., LL.B.
Lecturer in Sales

LEON BETTONEY NEWMAN, A.B., LL.B.
Lecturer in Massachusetts Practice

MAYO ADAMS SHATTUCK, A.B., LL.B.
Lecturer in Trusts

JOHN VARNUM SPALDING, A.B., LL.B.
Lecturer in Evidence

DWIGHT MERRILL ALDEN, A.B., LL.B.
Lecturer in Agency

FACULTY COMMITTEE ON ADMINISTRATION

EVERETT AVERY CHURCHILL, *Chairman*

SYDNEY KENNETH SKOLFIELD, *Dean*

ELIAS FIELD

CHALMERS ADDISON PEAIRS, JR.

CHARLES FREDERICK FRASER

DONALD ROBERT SIMPSON

HISTORICAL

NORTHEASTERN University School of Law was established in 1898 with the cooperation of the Honorable James R. Dunbar, Professor James Barr Ames, then Dean of the Harvard University School of Law, and Samuel Bennett, then Dean of Boston University School of Law. Later such men as Ezra Thayer, Dean of Harvard University School of Law, Samuel Elder, and Robert G. Dodge were active upon the Corporation of the school and were largely instrumental in shaping its policies and its development. The school has had over the years an unusual faculty of men who have been outstanding leaders in the profession. It has also enjoyed highly favorable recognition and endorsement by the bench and by the bar. The growth and influence of the school has been marked. Its graduates who have entered the practice of the law are men of high professional attainment. Many of the alumni occupy positions of leadership as executives in various fields of business.

With the occupancy of the new Law School Building at 47 Mt. Vernon Street it seemed to the Trustees that the time had come to establish a day school, while at the same time continuing its Evening Law School. Accordingly, definite action was taken whereby Northeastern University opened a Day Law School, entering its first freshman class in September 1938. The Trustees and officers of administration have put into effect such educational policies as will insure the Law School's maintaining, both in its day and evening programs, those standards which are in accord with the requirements of the standard accrediting associations for professional education in the field of the law. Through its day and evening undergraduate program leading to the Bachelor of Laws degree, and through its graduate program leading to the Master of Laws degree, the School of Law extends its services to a wide group of students who earnestly desire an effective preparation for the practice of the law, or who feel that a knowledge of the law is an effective means to successful executive work in business.

LOCATION OF UNIVERSITY BUILDINGS

Northeastern University is located in Boston, a city which is rich in education and cultural opportunities. The University center is on Huntington Avenue just beyond Massachusetts Avenue and opposite the Boston Opera House. Here on an eight acre campus are located the educational buildings of the University except that of the School of Law. The classes of the School of Law are all held in the Law School Building at 47 Mt. Vernon Street.

WEST BUILDING

The West Building at 360 Huntington Avenue contains over one hundred thousand square feet of floor space devoted to administrative and instructional purposes. On the first floor are the general administrative offices of the University. The University Bookstore, the "Husky Hut," and the student checkroom are located in the basement. There

are three large lecture halls and numerous classrooms and laboratories. The office of the Evening Division of the College of Liberal Arts is located on the first floor of this building.

EAST BUILDING

The East Building of the University is the educational wing of the Huntington Avenue Branch of the Boston Young Men's Christian Association. The general University library, classrooms, certain laboratories and the gymnasium are located in this building.

SOUTH BUILDING

The South Building of the University contains certain laboratories, a large lecture hall, and several classrooms.

LAW SCHOOL BUILDING

The Law School Building is located at 47 Mt. Vernon Street within a few minutes' walk from the State House and from the Court House, where the Supreme Judicial Court, the Superior Court for Suffolk County, the Land Court, the Probate Court for Suffolk County, and the Municipal Court for the City of Boston are housed. The Building, occupied exclusively by the Law School, has excellent classroom facilities, adequate library areas, and administrative and instructional offices. Opportunities are provided for study, effective use of the library, and contacts with the faculty outside the classroom.

UNDERGRADUATE CURRICULA

The Law School is divided into two divisions—the Day Division and the Evening Division. The same curriculum is offered in each Division, and the standards of work and graduation requirements are the same. A minimum of eighty-two semester hours of classroom instruction is required for the degree of Bachelor of Laws.

Three-Year Day Course. The completion of the course of study leading to the LL.B. degree in the Day Division requires that students shall be in regular attendance for a period of three years of thirty-two weeks each, exclusive of holidays, and shall devote substantially all of their working hours to their law studies.

Four-Year Evening Course. The Evening Division course leading to the LL.B. degree covers a period of four school years of thirty-six weeks each, exclusive of holidays and is equivalent in content and the number of classroom hours to the day program. The evening program is basically for those who are regularly employed during the day and can attend only the evening sessions of the School.

GRADUATE CURRICULUM

Two-Year Master's Course. The program for the LL.M. degree is two years in length. The instruction is designed to encourage students and active practitioners of the law to continue their law study after receiving the degree of Bachelor of Laws, so as to equip themselves for more effective professional work and for greater contribution to the administration of justice as members of the bar, as legislators, or in other forms of public service and to encourage investigations directed toward a better understanding and improvement of the law, both in its substance and in its application. The Master's Courses are all offered in the evening.

METHOD OF INSTRUCTION

The primary purpose of the School is to prepare for the practice of the law wherever the English common law system prevails, particular attention being given to the law of Massachusetts and the other New England states. To accomplish this aim, the instruction is designed to train the students in the fundamental principles of the common law and to develop their powers of legal reasoning and analysis. The instruction is based on the case method combining the study of basic principles with the analysis and interpretation of decided cases. Such analysis and discrimination constitutes a large portion of the work of a lawyer in his active practice. No knowledge of principles acquired wholly apart from the facts upon which they arise can replace the practical values which come from the actual dissection and analysis of cases by the student in his study or with the instructors in the classroom. Furthermore the knowledge of the law and the understanding of the growth and development of the law, which the student acquires through the case system, gives him a basis upon which to build as the law grows.

The case method of instruction as used at Northeastern, based on the preparation of assigned cases in advance of the class period, develops an interest and enthusiasm for the law which is not found under other than the case method, and, which is more important, develops that soundness of legal reasoning and knowledge of the law so essential to success at the bar.

ADMISSION OF STUDENTS

General Regulations. Catalogs of the School of Law, application blanks for admission, and special information concerning the School may be obtained by calling or writing the Registrar of the School of Law, 47 Mt. Vernon Street, Boston, Massachusetts.

The School of Law is open to men and women. Applicants for the degree must be at least eighteen years of age upon entering the first year class, and must be of good moral character.

All applicants for admission must file with the Registrar of the School of Law:

1. An application for admission to be made in writing upon the official form.
2. An official transcript of college records.
3. Two letters of reference concerning character and ability.

These credentials, wherever possible, should be filed prior to the registration period.

All requirements with respect to admission apply to students entering either for the day or evening curriculum of the School of Law.

Admission to Candidacy for the Degree of Bachelor of Laws. Any person may apply for admission as a candidate for the degree of Bachelor of Laws:

1. Who is a graduate of a college of approved standing and has received his Bachelor's degree, or
2. Who has satisfactorily completed in a college of approved standing one-half of the work acceptable for the Bachelor's degree granted on the basis of a four years' period of study by the principal colleges and universities of Massachusetts. Such applicants shall present at least sixty semester hours of college credit—exclusive of credit earned in non-theory courses in military science, hygiene, domestic arts, physical education or other courses without substantial cultural content.

Admission to Advanced Standing. An applicant who has complied with the entrance requirements for regular first-year law students prior to beginning his law study and who has successfully completed one or more years of work in a law school of approved standing may, upon the presentation of a certificate of scholarship and of honorable dismissal from such school, be admitted to advanced standing to the extent and on such conditions as the full-time faculty may prescribe. No applicant will be admitted, either as a candidate for advanced standing or for admission to the first-year class, who shall have previously attended another law school and who cannot return to that school in good standing. No credit will be given for work completed in a law school which is not approved by the American Bar Association.

Special Students. A limited number of applicants, who are at least twenty-three years of age and who can not qualify under the foregoing requirements for admission as candidates for the degree of Bachelor of Laws, may, in exceptional cases and at the discretion of the full time faculty, be admitted as special students. Applicants for admission as special students must give evidence of such general education and experience as will enable them to carry on and profit by the work of the school. Special students may not be candidates for a degree in the School of Law.

Re-Admission. Former students who have not been registered in the School during the two school years immediately preceding that in which they seek readmission, will be readmitted only at the discretion of the Faculty, and must, upon their return to the school, meet the entrance and degree requirements in force at the time of their re-entry.

Admission to Candidacy for the Degree of Master of Laws. Any person who has satisfactorily completed such pre-legal work as will entitle him to admission to this school as a candidate for the LL.B. degree, and subsequent to such pre-legal study has received the degree of LL.B., or an equivalent degree, from an approved school of law, may, at the discretion of the Dean, be admitted to the Master's course as a candidate for the degree of Master of Laws (LL.M.).

One who meets the requirements for admission as a candidate for the LL.M. degree, and who desires a knowledge of particular courses because of their relation to his practice or other reasons, but not intending to pursue the entire program, may enroll for individual courses.

THE COURSES OF INSTRUCTION

The University reserves the right to withdraw, modify or add to the courses offered, or to change the order of courses as may seem advisable.

UNDERGRADUATE COURSES

AGENCY.

2 SEMESTER HOURS.

Agency defined; actual or ostensible; agency distinguished from trust, from sale, from lease; creation of the relation; scope of agency; authority and power of agent, manner of execution of authority; effect of relations as between principal and agent, between agent and third persons, and between principal and third persons; liability of principal for acts of agent; liability and rights by ratification; delegation of authority; duties and liabilities of the agent to third persons, to principal; undisclosed principal; duration and termination of relation.

BANKRUPTCY.

2 SEMESTER HOURS.

The course will cover the history of bankruptcy legislation, state and national; extent and operation of state insolvency laws; who may become a bankrupt; who may be petitioning creditors; acts of bankruptcy, including fraudulent conveyances, preferences and assignments for the benefit of creditors; what property passes to the trustee; dissolution of liens; what claims are provable against the bankrupt's estate; duties and powers of the trustee; duties of the bankrupt; discharge from bankruptcy; compositions in the bankruptcy court; bankruptcy procedure.

BILLS AND NOTES.

3 SEMESTER HOURS.

The provisions of the General Laws of Massachusetts, Chapter 107 — Negotiable Instruments Law (in Massachusetts only). Formal requisites of negotiable and non-negotiable bills of exchange, checks and notes; obligations and rights of the various parties to such instruments, makers, acceptors, drawers, drawees, payees, indorsers and indorseees; suits upon bills and notes; pleading and defenses, accommodation paper, bankers' and trade acceptances; letters of credit; guaranty and generally of the transfer, negotiation and extinguishment of bills and notes.

BUSINESS ASSOCIATIONS.

6 SEMESTER HOURS.

I, The nature of a corporation; II, Intra corporate problems, voting control, management, stockholders' rights, control by managers, securities; III, Inter corporate problems, powers of corporations, unauthorized corporate action, ultra vires, rights of creditors, reorganization.

Embracing the creation of partnership; rights and duties of partners among themselves; power of partners to bind firm; individual liability of partners; dissolution.

CONFLICT OF LAWS.

4 SEMESTER HOURS.

General background and theoretical bases of Conflict of Laws and rules for the application of Conflict of Laws principles; general requirements of domicile; domicile by operation of law; definition and character of jurisdiction; jurisdiction of courts; a consideration of various problems of family law with emphasis on marriage, divorce, legitimacy and adoption; property interests including movables and immovables; intangibles and matrimonial property interests; torts; contracts and related obligations including foreign judgments and other imposed duties; procedural matters; and administration of estates, trusts and receiverships.

CONSTITUTIONAL LAW.

4 SEMESTER HOURS.

Written and unwritten constitutions; history and sources of written constitutions in the United States, state and national; establishing and amending constitutions; distribution of powers between the national and state governments; distribution of powers among the three departments; the judicial department; nature of judicial power; jurisdiction of the federal government, criminal and civil; express, implied, resulting and inherent powers; functions of administrative officers; citizenship; civil and political rights; the police power; the right of eminent domain; taxation; impairment of contracts, *ex post facto* and retrospective legislation generally, regulation of commerce.

CONTRACTS.**6 SEMESTER HOURS.**

Offer and acceptance; consideration; performance of, or promise to perform, an existing legal obligation as consideration; moral obligation as consideration; past or executed consideration; parties to a contract, including aliens, executors and administrators, guardians, infants, insane persons, intoxicated persons and married women (omitting agents, corporations and partners as these subjects are given in other courses); contracts under seal, including the form, requisites thereof, delivery and the matter of consideration; rights of beneficiaries under a contract; rights of assignees of a contract; conditions in contracts; rescission of contracts; damages for breach of contract; illegality; duress; mistake; statute of frauds, quasi-contracts.

CRIMINAL LAW.**4 SEMESTER HOURS.**

Sources of criminal law; the elements of crime; effect of consent, condonation, negligence, or other misconduct of person injured, coercion and necessity; criminal intent; effect of mistake of fact, infancy, insanity, and intoxication; the criminal act; attempts; parties in crimes; assault and battery; mayhem; false imprisonment; abortion; rape; murder and manslaughter; larceny; embezzlement; obtaining property by cheats and false pretenses, receiving stolen property; burglary; arson; forgery; libel; perjury; conspiracy; criminal procedure in Massachusetts.

DAMAGES.**2 SEMESTER HOURS.**

The theory and practice of the measure of relief in court; respective functions of court and jury in estimating damages, exemplary, liquidated, nominal, direct, and consequential; avoidable consequences; certainty, compensation, damages for non-pecuniary injuries; questions of value; interest; expenses; damages in the various types of tort and contract actions, and damages in taking under the right of eminent domain.

DOMESTIC RELATIONS.**2 SEMESTER HOURS.**

The law of husband and wife, the contract to marry; nature and requirements of marriage; relations between husband and wife; parent and child; dissolution of marriage by annulment, divorce and judicial separation.

EQUITY.**6 SEMESTER HOURS.**

A study of the nature and history of equity jurisdiction; the basis of equitable relief, property rights distinguished from personal rights and the right of privacy; the grounds for equitable relief; doctrines of equity; and a consideration of the procedure in the conduct of a case in the Equity Court.

EVIDENCE.**5 SEMESTER HOURS.**

Rules of evidence in the Federal Courts; machinery of the trial; examination of witness; refreshing recollection of witnesses; impeachment and corroboration of witnesses; admissions and confessions; character evidence; the opinion rule and the expert witness; the hearsay rule; statutory exceptions to the hearsay rule; common law exceptions to the hearsay rule including dying declarations, statements of fact against interest, pedigree, entries in the regular course of business, official records, declarations as to physical and mental conditions, res gestae; real evidence; best evidence rule; authentication of documents; handwriting evidence; privilege against self-crimination; privileges based on the marriage relationship; attorney-client privilege; judicial notice; the parol evidence rule; presumptions and burden of proof.

INSURANCE.**2 SEMESTER HOURS.**

The history, nature and development of the general principles of insurance law as applied to the various forms of insurance contracts with respect to insurable interest, concealment, misrepresentation, warranties, and other causes of invalidity of the contract; amount of recovery, subrogation, conditions, waiver, estoppel, election and powers of agents, assignees and beneficiaries.

JUDICIAL PROCEDURE.**4 SEMESTER HOURS.**

The origin and development of the common law actions; the forms of actions, local and transitory, real personal and mixed; original and judicial writs; pleadings, their purpose, forms and rules by which they are governed; changes by statute in common law forms of pleadings; effect of pleadings on the conduct of a cause.

A study of the judicial system with reference to its historical background and growth; the court and its officers; the judge; the attorney, and their relations with each other and the public; a discussion of problems of interest to the profession relating to the status, functions, duties and responsibilities of the lawyer; and the standards of professional conduct.

LANDLORD AND TENANT.**2 SEMESTER HOURS.**

The nature of the relation; tenancies distinguished from other relationships; express and implied tenancies; contracting parties; rights and liabilities of landlord and tenant.

MASSACHUSETTS PRACTICE AND PLEADING AT LAW AND IN EQUITY.**2 SEMESTER HOURS.**

Divisions of courts in Massachusetts and jurisdiction of each; venue of actions, writs and service of same; indorser for costs; attachment of property on mesne process, by trustee process, and in equity; arrest on mesne process; entry of actions; appearances; non-suits and defaults; the Practice Act; the pleadings including declarations, motions to dismiss, answers and pleas in abatement, demurrers, and answers and pleas in bar; amendments; specifications; interrogatories; depositions; demand to admit facts; set-off, recoupment and cross actions; marking cases for trial; advancing actions for speedy trial; auditors, masters and assessors; tender and offer of judgment; motions, claim for jury trial; jurors, summoning witnesses; procedure at trial; verdicts; motions for new trial; motions in arrest of judgment; appeals; exceptions; reports; reservations; judgments; executions.

MORTGAGES.**2 SEMESTER HOURS.**

The characteristic mortgage doctrines; the long and statutory short forms; equitable mortgages; construction loan mortgages; deficiency judgments; effect of passage of time on mortgages; taxes; insurance; assignment by mortgagee and mortgagor; merger; partial release and discharge; marshaling; special emphasis on the practice of foreclosure; redemption.

MUNICIPAL CORPORATIONS.**2 SEMESTER HOURS.**

The nature, creation, constitution, control alteration, and dissolution of municipal corporations; their charters, proceedings, officers, and agents; powers and liabilities, taxation and indebtedness.

OFFICE PRACTICE.**1 SEMESTER HOUR.**

This is a practical course covering the fundamental principles of drafting legal documents, including contracts, conditional sales, conveyances, mortgages, leases, wills, trusts, partnership agreements, etc. It also covers the problems of office management, as to personnel, office records, correspondence, filing system, time recording, valuation and billing, clients' accounts, and office library. Considerable time is given to the use of law books and the preparation of cases.

PERSONAL PROPERTY.**2 SEMESTER HOURS.**

Distinction between real and personal property; possession, bailment; finder; lien; pledge; acquisition of ownership in chattels, including bona fide purchase, adverse possession, accession, confusion, judgment, satisfaction of judgment, and gift; fixtures and emblements.

PRACTICE COURT.**1 SEMESTER HOUR.**

The Practice Court supplements the course in Common Law Pleading and is under the control and direction of the faculty. The purpose of the court is to give the students an opportunity to apply their knowledge of pleading and procedure and their knowledge of the substantive law in the conduct of an actually litigated controversy. The practice, so far as is possible, follows that of actual litigation. The senior students are divided into groups, or firms of lawyers, two in each group representing the plaintiff and two the defendant.

These firms institute their actions in the various courts and conduct them through their various stages to final judgment or decree. The work of the Practice Court is required of all regular students and must be performed satisfactorily as a condition of promotion.

PROPERTY I.**3 SEMESTER HOURS.**

Possession; air; land; streams; surface waters; underground waters; rights of reversioners; profits; easements; licenses; legal enforcement of covenants running with the land; equitable enforcement of agreements running with the land; rents, waste; public rights in waters and highways.

PROPERTY II.**3 SEMESTER HOURS.**

Feudal system of land tenure; estates in land, including historical development of methods of creating and conveying the same; reversions, remainders and other non-possessory interests in land; concurrent ownership; disseisin and the remedies therefor; uses and trusts, including the statute of uses; accretion, adverse possession; prescription; voluntary conveyances; form of deeds; description of property granted; estates created; creation and incidents of joint tenancy; tenancy in common and tenancy by entirety; creation of easements and profits; covenants for title; execution of deeds; recording; estoppel by deed; dedication; examination of titles.

PROPERTY III.**3 SEMESTER HOURS.**

Future and conditional interests in property.

Estates on condition, rights of entry for condition broken, license and waiver of breach, possibilities of reverter, reversions, vested and contingent remainders, future uses, executory devises and bequests, failure of executory devises, construction of limitations, cross-limitations, vesting of legacies, gifts on failure of issue, ascertainment of classes, powers, rule against perpetuities, restraints on alienation, illegal and impossible conditions.

SALES.**3 SEMESTER HOURS.**

Sales and mortgages of personal property; historical and philosophical basis of this branch of law; subject matter of a sale; parties to a sale; the effect of fraud; passage of title; risk of loss; rights of the seller under the contract; conditional sales; documents of title; warranties expressed and implied; the rights of the buyer under the contract, and formalities of the contract.

SURETYSHIP.**1 SEMESTER HOUR.**

Rights of the creditor; rights of the surety against the principal, including reimbursement, subrogation and exoneration; rights of a surety against a cosurety, including subrogation and contribution; subsuretyship; creditor's interest in securities held by the surety; problems arising out of bankruptcy and insolvency; the statute of frauds; the surety's other defenses against the creditor.

TORTS.**6 SEMESTER HOURS.**

Definition of tort; theory of liability in tort; distinctions between tort and breach of contract; defenses to torts or apparent torts; assignability of right of action in tort; damages; discharge of torts; disability, including responsibility of infants, married women, insane persons, municipal corporations and charities for torts; assault and battery; false imprisonment; trespass to property; slander and libel; slander of title; enticement and seduction; loss of consortium; deceit; infringement of trademarks; malicious prosecution; negligence.

TRUSTS.**4 SEMESTER HOURS.**

Embracing the nature of a trust including analytical and practical distinctions between trusts and bailments, debts or contracts, conditions, mortgages and other relationships with emphasis upon the relation between banker and customer and broker and customer; the creation of a trust including intention, matters of consideration and the statutes of frauds and wills; the elements of a trust, its subject matter, the trustee and the *cestui que trust*;

the charitable or public trust; resulting and constructive trusts and a consideration of typical situations where trusts are imposed by law; the administration of trusts; the nature of the *cestui que trust's* interest; powers and duties of the trustee, the investment of trust funds and the liabilities of the trustee to the beneficiary; liabilities to third persons; the doctrine of *bona fide* purchase and the consideration of what persons are bound by a trust; the transfer of the interest of the *cestui que trust* and the termination of a trust.

WILLS.

3 SEMESTER HOURS.

Escheat; descent; statutory rules; wills — kinds, alternatives, advantages and scope of; execution, sound mind, fraud and undue influence; mistake; form; attestation; incorporation by reference; revocation by change in circumstance; by subsequent instrument; by physical act; dependent relative revocation; revival; republication; lapsed, void and deemed gifts; conflict of laws; construction, probate and administration; jurisdiction; procedure; powers of representative; payment of debts; payments of legacies and distribution; statutory rights and allowances; practice.

GRADUATE COURSES

ADMINISTRATIVE LAW.

2 SEMESTER HOURS.

This course deals with the powers and duties of public officers and of the organization and procedure of administrative agencies. It includes a consideration of the distinction between legislative, judicial, and executive powers; the conclusiveness of administrative determination; the requirement of due process; and the extent of judicial control over administrative action. This will include: The law of public officers; dealings with governmental units under which these officers work; administrative discretion; notice and hearing as requisites of administrative action; judicial interference with administration; finality of administrative determination; municipal legislation; powers, revenue; property rights; indebtedness; and liability.

ADMIRALTY.

1 SEMESTER HOUR.

This course deals with jurisdiction, general average and marine insurance, bottomry and *respondia*, salvage, maritime torts defined and limited; American and English doctrines on survival of actions for fatal injuries, navigation rules, damages in collision, limited liability act, priorities of maritime and non-maritime liens, pleading and practice, federal and state statutes changing the common law.

APPELLATE PRACTICE AND BRIEFS.

3 SEMESTER HOURS.

Develops the fundamental principles underlying the procedure commonly employed in the courts of Massachusetts and in the trial and review of causes, both at law and in equity. The problems of appeal are based upon and pre-suppose steps taken, and motions and exceptions made before, during, and after the trial or proceeding in the lowest court. Therefore, the course will embrace as foundations for appeal the topics of venue, jurisdiction, judgments on default and demurrer, and arrest of judgment; continuance, the incidents of a jury trial, such as the right to a jury, its selection, opening statement, conduct of counsel, dismissal, non-suit and directed verdict, instructing the jury, and the verdict; trial by court without a jury, and the judgment.

What is reviewable; methods of review; parties to proceedings for review; preparation of briefs and handling of appeals in the various appellate courts.

CONVEYANCING SEMINAR.

4 SEMESTER HOURS.

This course will demonstrate the application of theoretical real property law to the practice of conveyancing, or passing upon real estate titles. Actual problems facing the conveyancer will be demonstrated and discussed. The student will be instructed in the preparation and use of the many forms which the conveyancer must utilize in his daily tasks.

Seminar discussions will give actual acquaintance with selected famous titles upon which much Metropolitan realty depends, and with famous cases in the Massachusetts Supreme Court involving real estate problems.

The course will cover the problems of the conveyancer in passing upon titles to real property—pertinent legal principles as to all of the various rights and incumbrances incident to ownership of real property—prescriptive rights, easements, restrictions, adverse possession, covenants, transfers through death with or without administration, mortgages, liens, fraudulent conveyances, equitable servitudes, etc.—land registration procedure, title certificates, preparation of deeds, mortgages, contracts to buy and sell, releases, and other papers.

The course will provide a practical review of the entire field of real property; probate practice as it pertains to real estate, and Land Court practice in Massachusetts.

INTERNATIONAL LAW.

2 SEMESTER HOURS.

This course deals with the origin, development, sources and force of international law; acquisition and recognition of international status; neutralized and protected states, recognition of belligerency, international right of existence and independence, intervention, property; jurisdiction over lands, seas, persons, nationals and aliens; diplomatic relations, treaties and international agreements, arbitrations and awards, reprisals, embargo, sanctions and blockade; definition of war, rights and obligations of belligerents, non-hostile relations between belligerents; capture, treatment, exchange and release of prisoners; military occupations and government, armistices, methods of termination of war, rights of neutral states against search of vessels, seizure of contraband and blockade; national and international prize courts.

LABOR LAW.

2 SEMESTER HOURS.

This course will embrace an historical introduction to the labor laws; a study of the permissible ends towards which the concerted activities of employers may be directed; the legality of various forms of concerted activity, such as strikes, lockouts, boycotts, picketing; the labor injunction, including State and Federal legislation on the subject; legal aspects of the collective labor agreement; labor combinations under the Sherman Act; Federal and State labor relations acts.

LEGAL HISTORY AND JURISPRUDENCE.

4 SEMESTER HOURS.

a. Legal History

The historical development of the common law, and of the courts and institutions through which it functions, will be worked out in a series of horizontal periods. The purpose is practical as well as scholarly; it is to study and evaluate the past so that its materials may be understood for use in the practical legal present and some estimate may be made of the future.

Some familiarity will be acquired with great men, statutes and phrases which are still referred to in legal discussions and decided cases.

For the purpose of comparisons, there will be a brief outline of all the world's legal systems, other than the Anglo-American. Interesting similarities of juristic theories and practices will be pointed out.

b. Jurisprudence

The science of justice is woven into the various periods of legal history, because it is deemed to be an inescapable part thereof. For earlier periods, the broad swings towards and away from stability and flexibility will be the chief matter studied. In more recent times, an outline of the analytical, philosophical and historical schools of jurisprudence will be evolved, with current theories and tendencies. American legal decisions will be used to illustrate recent theories of the science of law wherever possible.

LEGAL RESEARCH FOR PRACTITIONERS.

1 SEMESTER HOUR.

Materials of Research:

Legislative enactments: editions of Federal and State Constitutions, official, unofficial, annotated, unannotated; editions of Federal and State Statutes, official, unofficial, annotated, unannotated; treaties; governmental orders and regulations; municipal charters and ordinances; Rules of Court. Form of legislative acts, slip laws, session laws.

Judicial precedents: editions of Federal Reports, Supreme Court, lower Federal Courts, official, unofficial, annotated, unannotated; State Reports; National Reporter System; unannotated reports; special subject reports; decisions of administrative bodies.

Books of index: digests; textbooks; restatements; encyclopedias; annotations; citators; dictionaries; legal periodicals; appeal papers.

Methods of Research:

In Legislative enactments, Federal and State, direct and indirect methods; judicial precedents, Federal and State; the fact index method of approach — analysis of fact elements; topic method of approach; words and phrases method of approach; use of tables. Supplementing and evaluating precedents. Special emphasis will be placed on Massachusetts materials and methods of research in statutory compilations and reports of judicial precedents from 1628 to date. Particular reference will be given to methods of ascertaining the legislative and judicial history of local statutes, whether amended, superseded, repealed, etc., with judicial interpretations thereof. Some attention will be given to English materials and methods of research. The class lectures will be supplemented by actual demonstrations of methods in the school library. Suggestions will be made as to library requirements in the office of the practicing lawyer.

LEGAL SEMINAR.**2 SEMESTER HOURS EACH YEAR.**

This course will continue throughout the entire two years. The work will deal with fundamental subjects of the law by means of the presentation of written papers on assigned readings and research, followed by class discussion, formal argument, and the submission of briefs.

During the first year the following topics, among others, will be considered: Patents, copyrights and trade-marks, domestic and foreign; naturalization, nationality, aerial jurisdiction, expatriation, extradition and rendition, neutralization, marine insurance, inevitable accidents, maritime liens; other subjects in International, Admiralty, and Constitutional Law.

During the second year topics dealing with unfair competition, interference with contract, taxation and other pertinent topics will be considered, and a graduate thesis on some legal topic will be prepared and submitted as one of the requirements for the degree.

PUBLIC UTILITIES.**2 SEMESTER HOURS.**

Development of the public utility concept; entry into public service; creation of the relation of public utility proprietor and patron; basis and extent of the public utilities' duties—as to service to all; adequate facilities, discrimination, reasonable rates; performance of the service; termination of the relation; withdrawal from service; utilities' right to make regulations; regulation by public through administrative agencies; functioning of such agencies; judicial review.

TAXATION.**2 SEMESTER HOURS.**

The purpose of this course is to present taxation as a specialized art or function of the lawyer, rather than as an aspect of constitutional law, conflict of laws, accounting, or economics; to give the student information as to how taxes work and why they fail. To accomplish this aim, the course deals with the legal basis and legitimate purposes of taxation; the so-called general property tax and tax administration, protests to city assessors, and proceedings before the Massachusetts Board of Tax Appeals, estate, inheritance, and gift taxes; the income tax, State and Federal, its constitutional limitations, jurisdiction, the nature of taxable income, and the administration of the tax, modern excise taxes on business concerns, State excise taxes, Federal capital stock and excess profits taxes.

REQUIREMENTS FOR DEGREES

DEGREE OF BACHELOR OF LAWS (LL.B.)

To be eligible for the LL.B. degree, a student must have met the following requirements:

Age. A student must be twenty-one years of age at the time of receiving the degree.

Period of Study. A student must have been in regular attendance for a period of three years in the day curriculum or four years in the evening curriculum. An advanced standing student from an approved Law School shall attend such period as the full time faculty may determine, but in no case shall an advanced standing student qualify for his degree with less than one full year of regular attendance at Northeastern University School of Law.

Examinations. A student must have passed satisfactory examinations in at least eighty-two hours of required courses and secure the required general average. The minimum general average for the LL.B. degree is as follows:

(a) With no conditions in any law school subjects — a weighted average of sixty-seven per cent.

(b) With one unsatisfactory grade in the subjects of the last two years — a weighted average of seventy per cent.

Honors. To qualify for honors a student must have met all of the above requirements and in addition thereto have passed his examinations with distinction in all of the courses required for the LL.B. degree. There are two classes of honors:

Cum Laude. Students who have met all of the requirements for honors and attain a weighted average grade of between eighty-five per cent and ninety-one per cent, both inclusive, will be recommended for the degree, *Cum Laude*.

Magna Cum Laude. Students who attain a weighted average grade of ninety-two per cent or better will be recommended for the degree, *Magna Cum Laude*.

DEGREE OF MASTER OF LAWS (LL.M.)

To be eligible to receive the degree of Master of Laws, a candidate must have qualified for admission to the Master's course in candidacy for the Master's degree, and have passed satisfactorily courses aggregating at least six hours of class work a week for two school years. In addition, the candidate for such degree must engage in seminar and research work under the direction of some member of the faculty and complete and submit a satisfactory thesis on some subject chosen after consultation with the instructor, under whose direction the research is to be done.

GENERAL INFORMATION

REGISTRATION

The filing of an application for admission to the School does not constitute registration. All students, including those entering the School for the first time, are required to register personally at the Law School Office and arrange for the payment of their tuition during the registration period.

Students are urged to register before the opening date whenever it is possible to do so.

TUITION AND FEES

All checks for tuition and fees should be drawn payable to the order of Northeastern University.

Registration is not considered as completed, and students are not permitted to attend lectures until they have registered and have paid their tuition and other fees, or have made satisfactory arrangements with the Dean of the School of Law. Payments due the University may be made at the School office, or mailed to Northeastern University, School of Law, 47 Mt. Vernon Street, Boston, Massachusetts. The University reserves the right to change tuition rates or fees whenever in their discretion such action is deemed advisable.

Application Fee. The application fee of \$5 must accompany the application for admission and is payable only once on initial entrance to the School. The fee is not refundable.

No application fee is required of those applicants for admission to the graduate course who are graduates of Northeastern University School of Law and have previously paid an application fee in the School of Law.

Tuition.

Undergraduate Students.

Day Program. The annual fee for tuition is \$200. payable in four installments of \$50 each. The first installment must be paid before attendance upon lectures.

Evening Program. The annual fee for tuition is \$160. payable in four installments of \$40. each. The first installment must be paid during the opening week of school.

The tuition charge for either day or evening students carrying less than a full program, and for all courses in addition to a full program is at the rate of \$8. for each semester hour.

Incidental Fee. An incidental fee is charged all students each year and is payable at the time of payment of the first installment of tuition. The Fee for students in the Day Program is \$7. and for those registered in the Evening Program is \$5. For students carrying less than a full program, or courses in addition to a full program, an Incidental Fee of thirty cents (\$.30) for each semester hour is charged.

Graduate Students. The tuition fee is \$125 a year, payable in four quarterly installments.

The tuition fee for individual courses is on the basis of \$10.50 for each semester hour.

Examination Fees. Students taking an examination for the purpose of removing a condition, or for advanced standing credit, are charged an examination fee of \$5 for each examination so taken.

Graduation Fees. A graduation fee of \$10 is charged all candidates for the LL.B. or LL.M. degrees, payable on or before May 1, of the year in which they qualify for their degree.

Expense for Books. The average yearly expense for casebooks, notebooks and other supplies is \$30. In many instances this expense may be reduced by purchasing used casebooks.

Through the efforts of the Class of 1935, a Lending Library has been established to assist students of limited means. Students may obtain books from this library, for use during the school year, upon the payment of a nominal sum.

In General. Students are not permitted to attend lectures until they have registered and have paid their tuition, or have made satisfactory arrangements with the Dean of the School of Law.

No reduction in tuition or fees is made on account of late registration.

Students who cannot meet their tuition payments before the due date should arrange with the Dean for the late payment of their tuition.

The University policy is that each quarterly installment must be paid in full before the student may continue his attendance upon a subsequent quarterly period.

No grades are issued until all financial obligations to the University are discharged.

No student will be advanced in class standing or permitted to re-enroll in the University until all the bills of the previous year have been paid, and no degrees will be conferred upon students who have not paid all their dues to the University. No student will be given honorable dismissal from the School unless he shall have paid all his Law School bills.

A \$2 deferred payment fee will be added to all bills which are not paid by the Saturday following the date on which the payment falls due. Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes until the matter has been adjusted with the Dean.

Withdrawals and Refunds. If a student withdraws for good cause from a course and is permitted subsequently to repeat it, he shall be credited with the tuition paid by him. Such credit cannot be applied, however, until the balance due on the course has been paid. This rule does not apply where refund has been made.

In the event a student is obliged to withdraw from the School in which he is enrolled for causes deemed adequate by the Committee on Withdrawals, the balance of the tuition paid will be refunded after the following deductions have been made:

- (a) Four per cent of the total yearly tuition charge shall be deducted for each week of attendance or fraction thereof, in the event of enrollment for a full school year.
- (b) In case the applicant has enrolled for a semester, the deduction shall be made on the basis of ten per cent of the total charge for each week of attendance or fraction thereof.

Attendance is computed from the opening date of the semester until the date of last attendance.

Application, deferred agreement and other fees are not refundable. Diploma charges are exceptions and will be refunded in the case of non-qualification.

No refunds are granted unless the application for withdrawal, together with the request for refund, and supporting data, are filed within forty-five days after the student has ceased attendance.

ATTENDANCE

Students are expected to attend with regularity the sessions of all courses in which they are enrolled. Students who are irregular in class attendance without justifiable cause may be dropped from the class rolls or be refused permission to take the final examinations in the course. No student during his attendance at the Law School may be registered in any other school or college, whether of Northeastern University or of any other institution, without the consent of the Dean.

EXAMINATIONS

Examinations are held at the end of each semester. All students are expected to present themselves for examination in all subjects in which they are registered at the time the regular examinations are held unless excused by the Dean. In case a student is excused from taking an examination or receives a conditional grade, he must take the next examination offered in such subject. If the content of the course is changed prior to the giving of the examination which such student takes, the student will be required to prepare himself upon the altered content of the course; and if the content of the course is redistributed or omitted so that no examination is thereafter given which fairly covers the subject matter, such student may be required to take an additional course in lieu of the course in which the incomplete or condition was received.

No special examinations will be given for the removal of conditions. Conditions must be removed at the next regular examination given in the course. Any student who takes a re-examination must pay a fee of \$5 for each examination so taken. A student, who, because of an unsatisfactory grade in a final examination in a course, has been given the privilege of a re-examination, will be required to obtain a minimum passing grade of sixty-five per cent.

A student who is required to repeat a course must secure a minimum grade of sixty-five per cent in the course which he is repeating in order to pass.

Periodic tests and hour examinations are given throughout the school year to enable both the students and the faculty to appraise the effectiveness of their work.

GRADES

The work of each student shall be graded upon examinations, according to the following scale:

	A	Superior
	B	Above Average
	C	Average
	D	Lowest passing grade
	E	Unsatisfactory
	F	Failure
No examination	Inc.	Incomplete

PROMOTION

Students are required to pass satisfactory examinations in all of the required courses of the curriculum. Scholastic standing is determined solely by the weighted average calculated upon the grades in all courses elected since entering the school.

1. Promotion from the First to the Second Year Class.

- (a) To enter the second year's class in good standing a student is required to make a weighted average of 64%.
- (b) If a student has failed in one or more courses of the first year and has earned a weighted average of from 60% to 63%, he shall at the discretion of the faculty, be placed on probation and required to repeat in full or in part, the entire year of work, or if he shall fail to present evidence which would tend to justify the belief that he has the ability to succeed in the law, he shall be asked to withdraw.
- (c) If a student receives a weighted average of E in the courses for the year, he shall be asked to withdraw from the school.
- (d) The requirements outlined above shall also be required in the Evening Division for promotion from the second to the third year class.

2. Promotion from the Junior to the Senior Class.

- (a) A student who has earned a weighted average of 67% shall be entitled to promotion to the Senior class in good standing.
- (b) A student who has earned a weighted average of from 64% to 67% shall be permitted to enter the Senior class on probation to carry such a program of courses as the faculty shall require.
- (c) A student whose weighted average in all courses at the end of the Junior year is only 64% or less and who has failed in one or more full year courses shall be asked to withdraw from the school.

Students in the first year are not allowed to take more than the required courses for the year.

Students who have earned a weighted average of 64% or below in any year may not enroll in the Day Division for more than 14 semester hours each semester, nor in the Evening Division for more than 11 semester hours each semester.

Students who have earned a weighted average of 64% to 67% may, with special permission, carry excess courses, but may not enroll, as to the Day Division, for more than 16 semester hours each semester, or, as to the Evening Division for more than 12 semester hours each semester.

A student, whose weighted average at the end of his senior year does not qualify him for graduation, shall be permitted to continue in the School, or to take examinations at the regular examination periods with a view to raising his average to the required level, only by a special vote of the Faculty Committee and upon such conditions as shall be prescribed in each instance.

DISCIPLINE

Attendance at the University is a privilege and not a right. The Faculty Committee reserves to itself the right to require the withdrawal of any student at any time whom it may deem unworthy either on account of his neglect of study, his incapacity for the law, or for any grave defect of conduct or character, and no reason for requiring such withdrawal need be given.

GENERAL NOTICE

The hours of instruction, casebooks used, subjects taught, degree requirements, and like matters are subject to change at the discretion of the Dean and the Faculty Committee but there will be no change in charges for tuition, or any other major change, during the school year for which a student has registered.

SCHOLARSHIPS AND PRIZES

UNDERGRADUATE PROGRAM

Law School Honor Scholarships

Northeastern University has created within the School of Law the following scholarships:

1. A \$50 scholarship shall be awarded to the member of each of the first and second year classes in the Day Division, and to each of the first, second and third year classes in the Evening Division, who receives the highest scholastic average for the year provided he re-enrolls for the next year.
2. Two \$25 scholarships shall be awarded to the two members in each of the first and second year classes in the Day Division, and to the two members of the first, second and third year classes in the Evening Division, ranking next in honor to the student receiving the \$50 award, provided in each instance the student re-enrolls for the next year.

In the event that a student qualifying for one of the above scholarship awards does not re-enroll, the next highest ranking student in his class shall receive the award.

Scholarships for College Graduates

A limited number of special scholarships have been established for college graduates. Awards will be made on the recommendation of the Dean and will be upon the basis of the applicant's financial need, character and scholastic attainments. These scholarships range from \$25 to \$35 per year.

Such scholarships will not be awarded to a student who is on probation or has a failure in any subject in this school.

Written application for college scholarships must be filed on or before the time of registration.

All applications must disclose in detail the amount and source of the applicant's income. These scholarships will be awarded for the year in September. One-quarter of the amount of the scholarship award is deducted from the tuition of each quarterly payment.

The Kappa Delta Kappa Scholarship

A scholarship gift to be awarded annually to the member of the Sophomore class, who, in the opinion of the administrative officers of the School, has through his personality, character, conduct, service and scholarship made the greatest contribution to the School. This award is to be made only in the event the student returns for his Junior year.

Benjamin Ginsberg Memorial Scholarship

A fund given by the Upsilon Delta Sigma Fraternity to establish a scholarship in memory of Benjamin Ginsberg of the Class of 1927. The scholarship is to be awarded annually to the highest ranking student of the Sophomore class.

Sigma Tau Epsilon Fund

A fund of \$100, the income to be used to purchase a prize in the form of a book to be presented to the student whose grades rank the highest in the Freshman year. The student is to be presented with this prize only in the event he re-enrolls for his Sophomore year.

The Gamma Kappa Nu Scholarship Fund

A fund of \$800, the income to be used as a scholarship gift in the form of the first installment of tuition in the Senior year.

This scholarship gift "shall be presented annually to that woman in the Junior class who has done the most for the School and has also maintained a high scholarship in her studies, and provided that she registers for her Senior year."

Phi Pi Chi Scholarship

A fund, the income of which is to be used to purchase a prize in the form of a law book, to be presented to the student whose grades rank among the first ten on the Dean's list in the Freshman year.

The Executive Council of the Chapter in conjunction with the Faculty Adviser shall select the student. Presentation is to be made only in the event that the student enrolls for his Sophomore year.

Graduate Program

The University has created a few scholarships of \$25 each to be awarded annually to students enrolled as candidates for the degree of Master of Laws.

First-year as well as second-year students in the Master's Program are eligible for these awards. These scholarships will be granted at the discretion of the Committee on Administration to those students of high scholastic attainment whose need, ability, and fitness to pursue graduate study, merit the award.

LIBRARY

The law school library is well lighted and furnished and easily accessible. It contains more than 12,000 volumes and is steadily growing. The library is so arranged as to give the student direct access to the books in the stacks as well as in the reading room. The library contains many of the State Reports, the complete National Reporter System, the Federal Reports, and Reports of the Supreme Court of the United States, the English Reports, English and American Digests, and an extensive collection of encyclopedias, annotations, treatises, legal periodicals, approved textbooks, and all current casebooks.

The library is open weekdays from 8:45 A.M. to 10:00 P.M.; Sundays from 3:00 P.M. to 8:00 P.M.; and holidays from 12:00 M. to 6:00 P.M.

COLLEGES REPRESENTED IN THE STUDENT BODY

Amherst College	3	Northeastern University	31
Antioch College	1	Northwestern University	1
Armour Institute of Technology	1	Notre Dame College	1
Assumption College	1	Providence College	2
Bates College	3	Radcliffe College	2
Boston College	16	Ricker Junior College	1
Boston Teacher's College	1	Royal Academy of Music	
Boston University	51	Stockholm, Sweden	1
Bowdoin College	8	Salem Teacher's College	1
Brooklyn College	1	St. Anselm's College	1
Brown University	3	St. Joseph's College	1
Carleton College	1	St. Mary's College	1
Catholic University of America	1	St. Petersburg Junior College	1
Clark University	1	Simmons College	1
College of William and Mary	1	Smith College	1
Columbia University	1	Southeastern University	1
Dartmouth College	3	Technische Hochschule	
DePauw University	1	Darmstadt, Germany	1
Duquesne University	1	Tufts College	5
Emmanuel College	1	United States Naval Academy	2
Franklin and Marshall College	1	University of Alabama	1
Georgetown University	2	University of Kentucky	1
George Washington University	1	University of Maine	6
Guilford College	1	University of New Hampshire	1
Harvard University	37	University of Pennsylvania	3
Haverford College	1	University of Pittsburgh	1
Holy Cross College	6	University of Vermont	1
Lehigh University	1	University of Wisconsin	1
Massachusetts Institute of Technology	4	Upsala College	1
Massachusetts State College	4	Wesleyan University	3
Massachusetts College of Pharmacy	2	Western Reserve	1
Middlebury College	1	Williams College	1
New England Conservatory of Music	1	Yale University	2
New York University	4		244

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Frank Joseph Cavanagh
William Eber Corkum

Walter Leonard Facey
Joseph Henry Goodness
Fernald Hutchins

Thomas Edward Linehan
Charles Joseph Perry
Mary Patricia Potterton

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Max Samuel Ginsberg

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CUM LAUDE

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Vincent Francis Stulgis
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HAINER, HERBERT M., JR. <i>Northeastern University</i>	Haverhill	PRANSKY, NATHAN J. <i>Technical Hochschule Darmstadt, Sc.D.</i>	Winthrop
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			Belfast, Maine

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<i>Northeastern University, B.S. in B.A.</i>		<i>Harvard University, S.B. in E.E.</i>	
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COHEN, MELVIN	Chelsea	LAW, GEORGE	Arlington
CONNELLY, CLEMENT E.	Salem	LAWRENCE, PHILIP E.	Boston
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<i>University of Pennsylvania, A.B.</i>		LEARNER, NATHAN	Roxbury
CONVICER, ISRAEL	Dorchester	<i>Harvard University</i>	
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CRANNEY, MILTON E.	Peabody	LEE, CARTER	Quincy
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DAVIS, RALPH	Mattapan	MACDONALD, JOSEPH N., JR.	Auburndale
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DENNIS, ORVILLE F.	Wollaston	MACLEAN, ROBLEY D. E.	Wollaston
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<i>Catholic University, A.B.</i>		MACLEOD, MALCOLM A.	Roslindale
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DRUCKER, JACK	Boston	MCCORMACK, RICHARD F.	Belmont
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<i>Boston University</i>		MCKAY, FRANKLIN R.	Attleboro
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<i>Northeastern University, B.B.A.</i>		MELILLO, GUY	East Boston
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FALLON, LAWRENCE J.	Jamaica Plain		

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<i>Notre Dame, M.A.</i>		STALOFF, LAWRENCE	Dorchester
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<i>Holy Cross College, A.B.</i>		<i>Boston University</i>	
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SHILLER, HAROLD	Roxbury		
<i>Boston University</i>			

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<i>Boston University, M.B.A.</i>		CRONIN, PAUL J.	Cambridge
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		DAVIS, SYDNEY M.	Mattapan

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DOYLE, FREDERICK L., JR.	Arlington	KARLL, MORRIS	Chelsea
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DOYLE, KATHLEEN A.	Lynn	KEELER, FREDERIC J.	Dorchester
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<i>New York University</i>		KELLEY, GEORGE E.	East Braintree
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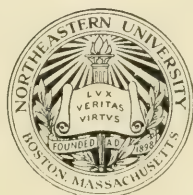
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Northeastern University

Administrative Organization

THE NORTHEASTERN UNIVERSITY CORPORATION

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Vice-Chairman

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HOWARD MUNSON HUBBARD
MAYNARD HUTCHINSON

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RUSSELL HENRY STAFFORD
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CHARLES STETSON
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EDWARD WATSON SUPPLE
BAYARD TUCKERMAN, JR.
ELIOT WADSWORTH
EDWIN SIBLEY WEBSTER
SINCLAIR WEEKS

DIVISIONAL COMMITTEES

WORCESTER DIVISION

Governing Board

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FREDERICK EUGENE BARTH
ROBERT WELLES BOOTH
ZELOTES WOOD COOMBS
JAMES CHERRY FAUSNAUGHT
HAROLD LUTHER FENNER
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VERNON AUGUSTUS JONES
ROBERT LINDO MOORE
ALFRED ERNEST RANKIN

JOHN RICHARDSON

SPRINGFIELD DIVISION

Board of Governors

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JOHN DOANE CHURCHILL
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BLAKE ALEXANDER HOOVER
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CHARLES ERNEST LEE
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GEORGE WILLIAM RICE, JR.
HORACE JACOBS RICE
STANLEY OSCAR SMITH
FREDERICK BENONI SWEET

PROVIDENCE DIVISION

Y. M. C. A. Schools Committee

ERNEST IRONS KILCUP, *Chairman*

RICHARD DAY ALLEN
JOHN EDWARD CANDELET
WILLIAM COVELL ELLIS
LUTHER NEWTON HAYES
PAUL REVERE LADD

CHESTER TOTTEM MOREY
WILLIAM WASHBURN MOSS
GREN OREN PIERREL
CLARENCE EDGAR SHERMAN
SHERMAN LEWIS SMITH

NORTHEASTERN UNIVERSITY AND AFFILIATED SCHOOLS

Statistical Summary — 1938-1939

	<i>Administrative Officers and Faculties</i>	<i>Students</i>
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	103	2,112
College of Engineering		
College of Business Administration		
School of Law	50*	1,461*
School of Business	105*	1,550*
Evening Division of College of Liberal Arts	4**	33**
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Technical Institute	38	532
Lincoln Preparatory School	19	437
Huntington Day School for Boys		
Regular Term	16	171
Summer Term	10	146
Total	353	6,442
Less Duplicates	42	403
Net Total	311	6,039

* These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

** The Evening Division of the College of Liberal Arts admitted students for the first time in September 1938.

School of Business

Calendar of Evening Sessions

Class sessions which fall on holidays are made up at the end of the course or as announced.

1940

September	3-10	Examinations for Removal of Conditions and Advanced Standing in Springfield.
September	9-13	Examinations for Removal of Conditions and Advanced Standing in Boston, Worcester, and Providence.
September	9-13	Upper classes begin in Springfield.
September	16-20	Upper classes begin in Boston, Worcester, and Providence.
September	23-27	Freshman classes begin in Boston and the Divisions.
November	11	Legal holiday (no classes).
November		Thanksgiving Day—Legal holiday (no classes).
December	20	Last class session before Christmas recess in Boston and the Divisions.

1941

January	2	First class session after Christmas recess in Boston.
January	6	First class session after Christmas recess in Worcester, Springfield, and Providence.
January	20-24	Second semester classes begin in Boston, Worcester, and Providence.
March	15	Last date for the submission of theses.
May	1	Last date for filing application for Degrees and for the payment of the graduation fee.
May	5-29	Final examination period.
May	30	Legal holiday (no classes).
June	1	Baccalaureate Services at Springfield.
June	4	Commencement Exercises at Springfield.
June	8	Baccalaureate Services at Worcester.
June	11	Commencement Exercises at Worcester.
June	15	Baccalaureate Services at Boston, and Providence.
June	16	Commencement Exercises at Boston.
June	20	Commencement Exercises at Providence.

Northeastern University

General Statement

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;

- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

—Co-operative Education by Day,

—Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools, the Lincoln Schools, and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

- 1 In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The Col-

- lege of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan, under which all of these day colleges operate, enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
- 2 The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
 - 3 The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the Evening Division of the College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Business. This School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of
 - Liberal Arts offers certain of its courses during evening hours constituting a program, three years in length, equivalent in hours to one-half the requirements for the A.B. or S.B. degree, and providing a general education and preparation for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.
 - 4 In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Associations in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions, thoroughgoing methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
 - 5 The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
 - 6 The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to

the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

LOCATION OF UNIVERSITY BUILDINGS

Northeastern University is located in Boston, a city which is rich in educational and cultural opportunities. The University center is on Huntington Avenue just beyond Massachusetts Avenue and opposite the Boston Opera House. Here on an eight acre campus are located the educational buildings of the University except that of the School of Law. The classes of the Evening School of Business are all held at the University center on Huntington Avenue.

WEST BUILDING

The West Building at 360 Huntington Avenue contains over one hundred thousand square feet of floor space devoted to administrative and instructional purposes. On the first floor are the general administrative offices of the University. The University bookstore, the "Husky Hut" and the student checkroom are located in the basement. There are three large lecture halls and numerous classrooms and laboratories. The offices of the Evening Division are located on the first floor.

EAST BUILDING

The East Building of the University is the educational wing of the Huntington Avenue Branch of the Boston Young Men's Christian Association. The library, classrooms, certain laboratories, and the gymnasium are located in this building.

SOUTH BUILDING

The South Building of the University contains laboratories, a large lecture hall, and classrooms.

LAW SCHOOL BUILDING

The Law School Building, located at 47 Mt. Vernon Street, within sight of the State House, contains administrative offices, a library, classrooms, student lounges, and other facilities. This building is occupied exclusively by the School of Law.

TRANSPORTATION

The University center is easily reached from the various railroad stations and from all points on the Boston Elevated System. Ample parking space is available.

WORCESTER DIVISION

The Worcester Division is located in the Worcester Y.M.C.A. Building at 766 Main Street, and in the new Alden Building facing on Murray Avenue, a five-minute walk south from the City Hall.

The School is easily accessible from all parts of the city and is within easy walking distance of both the Union Station and the bus and interurban terminals. Excellent bus service is maintained to all suburban points. Student rates may be obtained on practically all of these lines.

SPRINGFIELD DIVISION

Northeastern University, Springfield Division, is located two streets east of Main on Chestnut, corner of Hillman—a three-minute walk from Main via Hillman. It is reached from the Union Station by a five-minute walk south along Dwight to Hillman to Chestnut; and a three-minute walk north along Chestnut from the Public Library on State Street.

PROVIDENCE DIVISION

The Providence Division is located in the Y. M. C. A. Building at 160 Broad Street. This location is about an eight-minute walk from the center of the city. Adequate parking facilities are available for automobiles. The following car and bus lines pass the building: Broad Street, Elmwood Avenue, Reservoir Avenue, Pontiac Avenue, Auburn and Eden Park, and East Greenwich.

School of Business

Administrative Organization

GENERAL OFFICERS OF ADMINISTRATION

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D., *President of the University*
FRANK PALMER SPEARE, M.H., LL.D., *President Emeritus of the University*
EVERETT AVERY CHURCHILL, A.B., Ed.D., *Vice-President of the University*
GALEN DAVID LIGHT, A.B., *Secretary-Treasurer of the University*
RUSSELL WHITNEY, B.S., LL.B., *Dean*

LOCAL OFFICERS OF ADMINISTRATION

BOSTON

RUSSELL WHITNEY, B.S., LL.B., *Dean*
KENNETH STEVENSON, B.C.S., *Assistant to the Vice-President*
EBEN OSWELL SMITH, B.S., *Registrar*
ELLIS MERTON PURINTON, B.B.A., *Director of Vocational Guidance and Placement*
MYRA WHITE, *Librarian*
MARY B. FOOR, *Manager of the Bookstore*

WORCESTER DIVISION

WILLIAM ALBERT LOTZ, A.B., M.A., *Director*
CHARLES EDWIN HUTCHINS, LL.B., *Counselor to Students*

BOSTON

DORIS CLARK TOWNE, *Secretary to the Dean*
HELEN MARGARET STODDARD, *Recorder*
ELIZABETH BRECHEN HUNT, *Secretary to the Registrar*
ELIN VICTORIA PETERSON, *Secretary to the Vice-President*
GRACE HEWETT WATKINS, B.S., *Assistant Librarian*
CYNTHIA ELIZABETH WORT, *Assistant Librarian*
FLORENCE ELSIE AVELLAR, *Secretary to the Treasurer*
MABEL ELLEN BEAN, *Secretary to the Assistant to the Vice-President*
CONSTANCE ADELIA CONANT, *General Offices of the University*
VIRGINIA CUSHING DARLING, *General Offices of the University*
THELMA GERTRUDE DUNN, *Bookkeeper, Treasurer's Office*
DAISY MILNE EVERETT, *Assistant Treasurer*
MARJORIE GRAFFTE PROUT, *Secretary to the President*
HELEN LOUISE KOLDERUP, *Cashier*

PROVIDENCE DIVISION

LUTHER NEWTON HAYES, B.S., M.A., *Director*
CARL WILLIAM CHRISTIANSEN, B.C.S., C.P.A., *Associate Dean*
JOHN EDWARD CANDELET, B.S., A.M., M.B.A., *Counselor*
CLARENCE SCOTT TAYLOR, B.S., *Assistant Counselor*

SPRINGFIELD DIVISION

JOHN DOANE CHURCHILL, A.B., A.M., *Director*
EARLE HENRY PAINE, B.C.S., *Treasurer*
RALPH LORENZO BOWEN, B.C.S., B.S. in Ed., Ed.M., *Associate Director and Bursar*
GUY DOLPHUS MILLER, A.B., Ed.M., C.P.A., *Associate Dean*

SECRETARIAL AND OFFICE STAFF

ALYCE ANN NICHOLS, *Bookkeeper, Treasurer's Office*
ELLEN WHITEHOUSE PARKINSON, *Bookkeeper, Evening Division*

WORCESTER DIVISION

MARION WALLACE PORTER, A.B., *Registrar*
IRMA McALLISTER BROWN, *Secretary to the Director*
HELEN ELISSA LINDSTROM, *Bursar*
DOROTHY MAY BRIDGEMAN, *Librarian*
LAWRENCE JAMES GOULDEN, B.B.A., *Administrative Assistant*

SPRINGFIELD DIVISION

CAROLINE EDITH BERGMANN, B.C.S., *Registrar*
VIOLET LILLIAN VESTER, B.B.A., *Secretary to the Director and Recorder*

PROVIDENCE DIVISION

AVIS STOKES MACINTOSH, *Registrar and Secretary to the Director*
ELEANOR KNIGHT LUTHER, A.B., *Recorder*

DIVISIONAL COMMITTEE

GALEN DAVID LIGHT	EVERETT AVERY CHURCHILL, <i>Chairman</i>	
RUSSELL WHITNEY	EBEN OSWELL SMITH, <i>Secretary</i>	JAMES WALLACE LEES
JOHN DOANE CHURCHILL	LUTHER NEWTON HAYES	SYDNEY KENNETH SKOLFIELD
	WILLIAM ALBERT LOTZ	

COLLEGIATE SCHOOLS COMMITTEE

	EVERETT AVERY CHURCHILL, <i>Chairman</i>	
JAMES WALLACE LEES	SYDNEY KENNETH SKOLFIELD	EBEN OSWELL SMITH
	RUSSELL WHITNEY	

School of Business

The Background of an Institution

THIRTY-THREE YEARS ago, in March of 1907, the first undergraduate evening school of business in New England was organized. This was the beginning of Northeastern University School of Business, a pioneer endeavor to bridge an existing gap in business and professional education. Four years later, the School was authorized by the Massachusetts Legislature to grant university degrees to its graduates.

PURPOSE

Now, just as at the start, the school seeks first to determine what business needs in its personnel, and then to supply properly trained men and women who can fulfill those needs.

The training of a student at Northeastern has always been conducted so that a graduate receives not only a B.B.A. or a B.C.S. degree, but an immediately applicable vocational training equipping him to fill a better position in some one business activity. For his future, he has the advantage of a thorough background of business methods and an appreciation of the problems of management, which, if properly used, may lead to advancement and executive responsibilities.

Such a well-rounded preparation also enables a Northeastern graduate to achieve the higher social standing enjoyed by college and university graduates.

ADMINISTRATIVE POLICY

The School of Business was founded to serve those who have only evening hours free for study—a special field, limited to the education of the person who has permanently left day school and gone to work. The Northeastern University student is an adult, usually more mature than the student of a day school. He is in direct touch with business and is expected to take an active part in his own supervised training. The

constant effort of the administrative and teaching staff is toward more effective means of suiting their educational service to the individual evening student.

A program carefully adapted to the needs of the student, and the proper guidance of his time and effort in class group and study, call for high standards in administration. The administrative officers of Northeastern University function solely to help the student get the most value from his course of training. The Dean of the School, the Educational Directors in the Divisions at Worcester, Springfield, and Providence, the Registrars and other officers are available at all times to assist students. Those who desire any sort of advice or guidance in any part of their school work will find the officers of the School always ready to do their utmost.

METHODS OF INSTRUCTION

Because the evening student is daily in contact with business, his training logically should be in actual business problems. The School's instruction in nearly all courses is by the problem method. In a few introductory or survey courses the lecture and text book method is used in combination with the problem method. Most of the teaching staff are active business men whose practical experiences adequately fit them to carry through this type of instruction. Under such a method there is a more definite individual gain, for the theories of business are faced, so to speak, in their work clothes, and the student's vivid knowledge of economic principles is accompanied by the rise of a keener analytical interest in his business surroundings.

Business demands more than knowledge; it demands quick applications of that knowledge. A Northeastern graduate learns to think and act more independently and soundly when that demand is made of him.



Most of the School of Business classes meet in this new University building.

Cases and tests are frequently supplemented by stimulating lectures and class group discussions. Written reports and examinations serve only that the student may measure his own progress or as indications to the instructor of his success in helping the student to a fuller understanding of his subject.

SPECIAL VOCATIONAL GUIDANCE

Northeastern University School of Business does not end its educational responsibilities in merely providing courses of study. Its individual students are helped to determine their own abilities and the field of work in which those abilities will give them the greatest chance of advancement. When a student's interest has been established, the school then assists the student in fulfilling the requirements for success in his chosen field.

A student's personal guidance in this respect is not judged as completed in his first year. Rather it is a constant process continually modified to meet the changing conditions of business life during his entire term. The administration and faculty have in the last two years worked out and put into effect new plans in a broader effort to—

- 1 Acquaint students with various fields of business activity so that they may make more rational choices of a vocational field in which to specialize.
- 2 Aid students in the choice of specific vocational objectives within their chosen fields.
- 3 Provide facilities for study of vocational and specific job requirements, as well as the opportunities and the steps necessary to achieve progress.
- 4 Co-ordinate the student's education more closely to his vocational interests.

STAFF OF INSTRUCTION

The teaching staff of the School in Boston and the Divisions is recruited from business and professional leaders of New England business. The instructors are college-trained men who have proved their ability in their various fields of specialization. They are selected on the basis of their ability to convey knowledge to others in an interesting, inspiring, and effective manner. They are also chosen for the breadth of their training and experience. Their teaching is a work of enthusiasm freshened each evening by contact with those who are seeking seriously for knowledge, skill, and attitudes that will contribute to success.

While business essentials are stressed, cultural and ethical values are by no means neglected. The ability to think and judge independently usually results in cultural development. But the school has not been content to let the cultural side of its educational activities be merely a passive by-product. Instructors are men of high ideals and attainments, who have a genuine interest in those finer attributes of character and personality which make for good citizenship and the appreciation of worthy ideals. A large part of the success of the School and of the individual students may be traced directly to the contacts with instructors of the caliber selected by the School of Business.

SUCCESS OF THE ALUMNI

The best indication of the cumulative rewards to be won by pursuing a systematic program of study in spare evening hours is to be found in the records of Northeastern School of Business Alumni.

A recent study covering all Boston graduates conclusively shows that better positions and increased incomes are directly traceable to the evening hours spent in preparation at Northeastern.

A portion of this study is the comparison of positions held by the alumni when they entered the School as freshmen with the positions they held at the time of the study.

ALUMNI POSITIONS

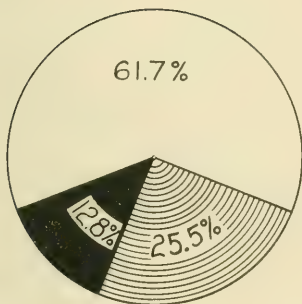
	<i>Upon Entrance %</i>	<i>Now %</i>
Presidents and Other Corpora- tion Officers	0.0	3.8
Owners of Business	1.0	13.1
Treasurers and Comptrollers	.3	7.7
Accountants	7.0	16.9
Office Managers	1.6	7.4
Department Managers	2.9	11.5
Salesmen	3.8	3.8
Educators	8.6	7.0
Government Employees	2.6	7.7
Bookkeepers	18.8	1.3
Clerks	34.2	6.4
Factory Workers	5.8	2.2
Unemployed	2.9	1.9
Miscellaneous	10.5	9.3

This pronounced trend to better and more responsible positions is further substantiated by a study of the income of the same alumni group over the same period.

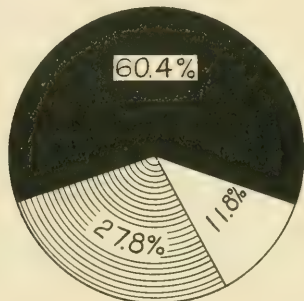
It was found that the Alumni who had been out of the School of Business not more than ten years, had increased their income an aggregate of 73.2%. For those who graduated more than ten years ago, this increase amounts to 223.6%. Another study of the income of students still in school shows that the average School of Business student begins his advancement in business and in income even while he is still at his training. On the average, the increase in income during the period of attendance more than covers tuition charges.

The charts on the next page show graphically the change from positions of minor responsibility to those of executive responsibility and indicate clearly the value of adequate business training. Even in depression periods Northeastern alumni, because of their training, have fared proportionately better than untrained men and women because it is the practice of employers to retain the best of their personnel when reductions become necessary.

THE STUDY OF POSITIONS HELD BY ALUMNI



At Time of Entrance



At Present

The Freshman Clerk becomes the Alumnus Executive



However, the success of alumni is not to be measured entirely by the dollar and cents increase in their incomes. Northeastern University School of Business Alumni, as a result of their broad training, have enlarged their whole horizon of life. They have developed a keener appreciation of the human values which count most in life. They have found valuable avenues of friendship and social contact. They have discovered larger opportunities for participation in social and civic enterprises. They have become not only better business men but better citizens.

THE STUDENT BODY

The character of a student body determines the standards which a school can maintain. Nothing is more essential to the success of an educational institution than a careful selection of incoming students. This principle applies just as readily to an evening school as to a day school. Standards are invariably adjusted to the average in-

telligence of the students. For this reason, Northeastern University School of Business maintains standards of admission which result in a student body capable of pursuing work of standard college grade during evening hours.

The student body consists of 1677 men and women of widely varied ages and occupations. The youngest student is 16 years of age and the oldest 60 years. The average age is 24.4 years.

About one-sixth of the students are married men who have realized that if they are to increase their earning power they must fit themselves for advancement. That the training offered by the School has enabled the students to improve their earning capacities and enlarge their responsibilities is conclusively proved by a study which showed that students in the School substantially increased their incomes in the six year period between entering the School and graduation.

In the student body 316 high schools and other preparatory schools are represented. Sixty-three colleges and universities are represented by 276 students who are either graduates or have attended one or more years.

In Boston, 562 students come from 105 different cities and towns, commuting from considerable distances.

In the Worcester Division, 285 students represent 32 separate communities; and in Springfield, 38 different communities, largely in the Southern Connecticut Valley, contribute 501 students.

The 294 students at Providence represent 47 cities of Massachusetts and Connecticut as well as Rhode Island.

PLACEMENT SERVICE FOR GRADUATES

While the School cannot guarantee positions to its graduates, the number of requests for men usually exceeds the number available in the graduating class of any given year. The policy of the School is to find the best equipped and qualified men among its graduates for the positions which the School is called upon to fill.

The School in recommending a graduate for a position furnishes the prospective employer with the facts as to the graduate's ability, character, attitudes, habits, and other qualifications for the position as revealed by the School records. In the last analysis, however, placement in a position depends quite largely upon the graduate's ability to sell his services to the prospective

employer. Most employers prefer to consider two or more candidates for a position and generally request the School to suggest more than one person. Many manufacturing and commercial firms throughout New England call upon this School to assist them in filling important executive and managerial positions.

No charge is made for placement service.

FOR STUDENTS

Many requests from employers are received by the School, during normal times, for young men of potential ability to fill important clerical and junior executive positions. It is the policy of the School to serve the students whenever possible by placing them in those positions which promise attractive opportunities for development and advancement. The School, however, cannot guarantee to place its students, but it does endeavor to keep in close touch with those who desire placement service and to assist them in obtaining satisfactory advancements in positions and income. No charge is made for placement service. Those needing this assistance should file an application at the School Office.

In recommending students for positions, preference is given to those who have completed a year or more of study in the School. The School must know something as to the abilities, habits, character, and general worth of an individual as revealed by his record as a student before it can recommend him for a position.

School of Business

**Staff of Instruction*

BOSTON

FREDERICK MORSE BASSETT,
B.C.S., Northeastern University; C.P.A.
Constructive Accounting
Accountant, Stewart, Watts and Bollong

ELLIOTT SHEFFELD BOARDMAN,
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Business Administration Seminar
Business Planning and Research
Manager, Industrial Statistics Division, Federal Reserve Bank of Boston

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Introductory Accounting; Intermediate Accounting
Instructor in Bookkeeping, Boston Clerical School

ALFRED D'ALESSANDRO,
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Cost Accounting; C.P.A. Accounting Review
Professor of Accounting, Northeastern University, Day Division

JOHN SYDNEY DAWSON,
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Torts and Crimes in Business
Attorney at Law, Hurlburt, Jones and Hall

JOHN ENNEGUESS,
B.C.S., B.B.A., Northeastern University; Harvard University
Accounting Problems

LEO THOMAS FOSTER,
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Income Tax Procedure
Head of Commercial Department, Jeremiah Burke High School

CHARLES MACKEY GANSON,
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Risks of Business
Attorney at Law, Taylor, Ganson and Perrin

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Marketing
Merchandise Manager, Dennison Manufacturing Company

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Public Speaking; Business Reports and Conferences; Counsellor, Business Readings and Theses
Instructor in Business Administration and Public Speaking, Babson Institute

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Retail Store Management; Department Store Administration

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Business Statistics and Forecasting; International Economic Relations
Statistician, New England Council

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*The Faculty for the year 1940-41 is published during the summer.

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 Economic Development of the U. S.; Money and Banking
Registrar, Northeastern University, Evening Division

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 Principles of Advertising; Retail Store Advertising
Advertising Service

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Dean, Northeastern University School of Business

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 Principles of Production; Scientific Management
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PROVIDENCE DIVISION

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Treasurer, Lymanville Company

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Factory Manager, Abrasive Machine Tool Co.

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 Economic Development of the U.S.
Head, Statistical Division, Unemployment Com-
ensation Board of R. I.

OSCAR TRUESDELL SHERMAN,
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Comptroller, Rhode Island Hospital Trust Com-
pany

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versity

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Vice-Principal, Oliver Hazard Perry Junior High
School

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Sales Promotion Manager, Bostitch, Inc.

ADAM ANDREW SUTCLIFFE,
B.S., M.C.S., Dartmouth College
 Marketing
Treasurer and Manager, Adam Sutcliffe Company

ALLYN KINGSLEY SUTTELL,
Northeastern University; C.P.A.
 Intermediate Accounting
Partner, F. E. Welch & Co.

ROLAND W. WEIKEL,
B.A., Yale University; Wharton School of Busi-
ness; C.P.A.
 Advanced Accounting
Manager, Haskins & Sells

School of Business

Programs of Instruction

THE SCHOOL provides the following major programs of instruction for undergraduate students:

ACCOUNTING

1. A specialized four-year program leading to the title of Associate in Accounting.
2. A six-year program leading to the degree of Bachelor of Business Administration in Accounting. (See page 20.)

MANAGEMENT

Four- and six-year programs with opportunity for specialization in one of the following fields:

Distribution
Industry

The four-year programs lead to the title of Associate in Business Administration and the six-year programs to the degree of Bachelor of Business Administration in Management (See page 23.)

LAW AND BUSINESS MANAGEMENT

A four-year program combining the study of law and business, leading to the degree of Bachelor of Commercial Science

in Law and Business Management. This course is offered in Boston but not in the Divisions. Six-year degree programs in Law and Business are offered in Boston, Worcester and Springfield. (See page 25.)

ENGINEERING AND BUSINESS

A six-year program combining the study of engineering and business, leading to the degree of Bachelor of Business Administration in Engineering and Management. This program is offered in Boston, Worcester and Springfield. (See page 27.)

SPECIAL PROGRAMS

Where the individual needs of a student necessitate, the School will provide special one-year, two-year, or longer programs to meet those needs. If, for good reasons, a student wishes to vary a regular program, he may do so upon securing approval from the Dean. (See page 28.)

SINGLE OR UNIT COURSES

For those who may wish to pursue one or more related or unrelated subjects instead of a title or degree program, opportunity is provided for enrolling in single or unit subjects. (See page 28.)

THE ACCOUNTING PROGRAMS

Students of accounting in the School of Business may follow programs of training in this specialized program which prepare them to take the examination for Certified Public Accountant (C.P.A.) or to carry on work of major responsibility in commercial accounting with private or public business firms.

Thoroughness of instruction is all-important. The trained accountant must be able to adapt himself quickly to the rapidly changing conditions of modern business. He should be ready to assume executive responsibility outside the field of accounting. This involves, of course, a background of understanding of various functions of business quite apart from the specialized accounting field. The shorter accounting program includes prescribed subjects for the title of Associate in Accounting and adequate preparation for the C.P.A. examination.

Upon completion of the four years of prescribed subjects for the title of Associate in Accounting, students may take two years of additional study required for the degree of Bachelor of Business Administration. These two additional years are greatly to the advantage of the student, since they give an opportunity to study managerial and administrative subjects which fit him to assume responsibility outside of the accounting field, and give him the basic understanding of business at large which is of vital importance to accountants who hope to make real progress.

OPPORTUNITY IN THE ACCOUNTING PROFESSION

Taxation, legal requirements governing qualifications for listing in the stock market, corporation laws governing the

preparation of financial reports, and many other developments in the conduct of business have broadened the scope of accounting to such a degree that in normal times the supply of trained accountants is not adequate to meet the demand. Moreover, a knowledge of accounting is universally regarded as essential in all phases of business management. There is a large field of public accounting which is being developed, and with the increased emphasis which financial institutions are placing upon accounting, the need for college trained Certified Public Accountants is increasing every year.

Opportunities in the field of accounting are many. Financial returns compare favorably with those of other professions such as law, medicine, and engineering.

The normal development of an accountant from the time he gets his degree is as follows:

First — as a junior assistant, he works on routine accounting procedure which is highly essential as a part of his experience. Compensation usually ranges from \$1,000 to \$1,500. The average man spends about two years in this position.

Second — as a senior assistant accepting some responsibilities, and performing somewhat of a professional service, the average man gets a salary which ranges from \$1,400 to \$2,500 a year.

Third — he now assumes full responsibilities for important assignments and becomes a senior accountant with a salary range from \$2,500 to \$5,000.

As a supervisor in charge of the work of other accountants, the salary range goes up to \$3,500 to \$10,000.

Fourth — the peak of success for accountants is firm membership. As a firm member, the accountant may not earn more than in the other higher positions, but usually earnings range from \$4,000 to \$25,000 a year, and frequently as high as \$50,000.

While the remuneration in the field of public accounting for properly trained men is attractive, the field of commercial and private accounting offers even more attractive inducement. The latest census figures show that there are 191,571 persons engaged as accountants and auditors in the United States. From trained accountants are selected many of the executives outside the accounting profession, including office managers, comptrollers, treasurers, and other officers of business concerns. Salaries of treasurers and comptrollers vary from \$4,000 to \$15,000; office managers from \$3,000 to \$6,000; chief accountants from \$2,500 to \$5,000. Many senior accountants have advanced into responsible executive positions paying \$10,000 and more.

QUALIFICATIONS FOR SUCCESS IN ACCOUNTING

There is no easy or royal road to success in accounting. The technique can be mastered only through continuous application, comparable to the preparatory work of a doctor, lawyer, or engineer. Mathematical accuracy is extremely important. The student must learn to analyze logically and soundly; to visualize and present situations as they develop. Each step, however painstaking and laborious, must be mastered by one who hopes to succeed either as a public or private accountant. Above all, the higher standards of honesty must be maintained, and the accountant's personal and

ethical conduct must be above suspicion. The successful accountant is able to make a good appearance, to present an agreeable personality, and to express his ideas clearly in good English. Northeastern University School of Business tries to train its graduates so that they possess all these qualifications. The School encourages only men with the proper personal, mental, and educational qualifications to enter the profession.

REQUIREMENTS FOR TITLE OF ASSOCIATE IN ACCOUNTING

(Four Years of Study Required)

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
A 1-2	Introductory Accounting	5
A 3-4	Intermediate Accounting	5
A 7-8	Accounting Problems	5
A 9-10	Cost Accounting	5
A 11	Auditing	2½
A 13-14	Income Tax Procedure	5
A 15	Constructive Accounting	2½
A 17-18	Advanced Accounting Problems	5
A 19-20	C.P.A. Accounting Review	5
E 1-2	Business English	5
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business (C.P.A. Law)	5
Total Semester Hours Required for Title		60

* See notes at bottom of page 28.

REQUIREMENTS FOR B.B.A. DEGREE IN ACCOUNTING

(Six Years of Study Required)

<i>Course Numbers*</i>	<i>Subject</i>	<i>Semester Hours</i>
A 1-2	Introductory Accounting	5
A 3-4	Intermediate Accounting	5
A 7-8	Accounting Problems	5
A 9-10	Cost Accounting	5
A 11	Auditing	2½
A 13-14	Income Tax Procedure	5
A 15	Constructive Accounting	2½
A 17-18	Advanced Accounting Problems	5
A 19-20	C.P.A. Accounting Review	5
E 1-2	Business English	5
E 5	Public Speaking	2½
E 6	Business Reports and Conferences	2½
E 7, 8	Business Readings or T 3-4, Thesis	5
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business	5
Ec 7-8	Business Statistics and Forecasting	5

<i>Course Numbers*</i>	<i>Subject</i>	<i>Semester Hours</i>
M 7-8	Credits and Collections	5
M 11-12	Government Controls in Business	5
	Occupational Experience	30
	Electives (To be se- lected subject to ap- proval)	10
	Total Semester Hours Required for Degree	125

The normal period of attendance for the Associate in Accounting Program is four years, thirty-three weeks each year, three evenings a week, two hours each evening; for the B.B.A. Degree Program, six years, thirty-three weeks each year, three evenings a week, two hours each evening, except for those who enter with advanced standing credit. Students who wish to attend less than three evenings a week may do so, extending the time required to complete their programs.

* See notes at bottom of page 28.



*A background
of accounting
is essential in
a graduate's
qualifications
for success*

THE MANAGEMENT PROGRAMS

"The field of business within the last twenty years has so widened and become so much more complex that the successful business man finds no limit set to his vision. As an executive he must possess the faculty of interpreting current events, the ability of analyzing situations, and a thorough knowledge of the principles underlying all successful business practice."¹

The complexity of modern business makes it exceedingly difficult for those who are dependent upon their own experience to develop those abilities and obtain the knowledge so necessary for the desired advancement in business. A broad perspective of business organization and operation develops viewpoints and habits that promote clear thinking and sound judgments in business decisions. This broad perspective demands not mere facts but also that executive power which can initiate plans and put them into effective operation. This power is seldom acquired from experience in details but comes from a thorough knowledge of business principles and of the proper application of those principles to the solution of problems. Executive and managerial leadership demands that power; the School of Business through its Management Programs proposes to develop it.

A recent extensive study² of occupational opportunities shows that most college men who enter work in distribution, industry, transportation, and banking become involved sooner or later in some function of operating management where they become responsible for the direction of human effort within their organization.

MERCHANDISING MANAGEMENT

A four-year program leading to the title of Associate in Business Administration and a six-year program leading to the degree of Bachelor of Business Administration are offered to students interested in Merchandising Management. Included are such courses as marketing, purchasing, retail store management, advertising, selling, credits and collections, department store administration, and many others so

essential to a sound knowledge of present day business problems. Not only are these rather specialized fields covered adequately but a thorough training is given in the principles of economics and the application of these principles to modern business conditions, thus making it possible for the student to see himself in relationship to the executive and managerial responsibilities he will need later to assume.

REQUIREMENTS FOR THE B.B.A. DEGREE IN MANAGEMENT AND THE TITLE OF ASSOCIATE IN BUSINESS ADMINISTRATION.

(Merchandising Major)

The courses listed immediately below meet in full the requirements for the title of Associate in Business Administration and in part the requirements for the degree of Bachelor of Business Administration.

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
A 5-6	Accounting Aids to Management**	5
D 1-2	Marketing	5
D 3	Principles of Selling	2 ½
D 4	Sales Management	2 ½
D 5	Principles of Advertising	2 ½
D 6	Retail Store Advertising	2 ½
E 1-2	Business English	5
E 5	Public Speaking	2 ½
E 6	Business Reports and Conferences	2 ½
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
L 1-2	Legal Aspects of Business	5
M 1-2	Business and Industrial Management	5
M 5	Psychology for Business and Industry	2 ½
M 6	Purchasing	2 ½
M 13-14	Retail Store Management and Department Store Administration.	5
Total semester hours		60

¹ Statement by Dr. Jeremiah W. Jenks, late President, Alexander Hamilton Institute.

² Dewhurst and Bossard, University Education for Business, Univ. of Pa. Press.

*, ** See notes at bottom of page 28.



A class in Distribution, relating sales problems and methods, conducts its own sales demonstration

The following requirements in addition to those listed previously must be met by all candidates for the degree of Bachelor of Business Administration.

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
E 7, 8	Business Readings or T 3-4 Thesis	5
Ec 7-8	Business Statistics and Forecasting	5
M 7-8	Credits and Collections	5
M 11-12	Government Controls in Business	5
M 17-18	Business Planning and Research	5
M 19-20	Business Administration Seminar	5
	Occupational Experience	30
	Electives (To be selected subject to approval)	5
Total Semester Hours Required for Degree		125

INDUSTRIAL MANAGEMENT

For students interested in the industrial side of business management, a four-year

title and a six-year degree program are offered. Not only are the usual business subjects included, but also adequate courses in the more technical fields of production and scientific management. Careful study is made of the fundamental manufacturing processes, factory organization, product design, methods of production and production control, time and motion study, and related topics. This program offers excellent training for managerial responsibility in industrial and commercial enterprises where a technical knowledge of management problems combined with a business background is needed.

REQUIREMENTS FOR THE B.B.A DEGREE IN MANAGEMENT AND THE TITLE OF ASSOCIATE IN BUSINESS ADMINISTRATION

(Industrial Major)

The courses listed immediately below meet in full the requirements for the title of Associate in Business Administration and in part the requirements for the degree of Bachelor of Business Administration.

*, **, See notes at bottom of page 28.

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>	<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
A 5-6	Accounting Aids to Management**	5	E 7, 8	Business Readings or T 3-4 Thesis	5
D 1-2	Marketing	5	Ec 7-8	Business Statistics and Forecasting	5
D 3	Principles of Selling	2½	M 7-8	Credits and Collections	5
D 4	Sales Management	2½	M 11-12	Government Controls in Business	5
E 1-2	Business English	5	M 17-18	Business Planning and Research	5
E 5	Public Speaking	2½	M 19-20	Business Administration Seminar	5
E 6	Business Reports and Conferences	2½		Occupational Experience	30
Ec 1-2	Business Economics	5		Electives (To be selected subject to approval)	5
Ec 3-4	Financial Organization	5		Total Semester Hours	
L 1-2	Legal Aspects of Business	5		Required for Degree	125
M 1-2	Business and Industrial Management	5			
M 3	Principles of Production	2½			
M 4	Scientific Management	2½			
M 5	Psychology for Business and Industry	2½			
M 6	Purchasing	2½			
M 9-10	Industrial Management Problems and Policies	5			
	Total Semester Hours	60			

The following requirements in addition to those listed previously must be met by all candidates for the degree of Bachelor of Business Administration.

LAW AND BUSINESS MANAGEMENT PROGRAM

(This program is offered in Boston only)

The complexity of the modern business structure emphasizes the increasing necessity for the business executive to understand not only the principles of his business but to possess a fundamental knowledge of the laws under which his business operates. In order to meet this need the School has developed a four-year program leading to the degree of Bachelor of Commercial Science in Law and Business Management.

As all business is organized and conducted on a legal basis, executive positions in practically every business demand at least a basic knowledge of the law on the part of those who are to be successful.

The normal period of attendance for the Associate in Business Administration program is four years, thirty-three weeks each year, three evenings a week, two hours each evening and for the B.B.A. degree programs, six years, thirty-three weeks each year, three evenings a week, two hours each evening, except for those who enter with advanced standing credit. Students who wish to attend less than three evenings a week may do so, extending the time required to complete their programs.

Underlying present large-scale marketing and production, which characterize today's business, is a net work of law which safeguards the rights of business men as they deal with one another and also defines the channels into which business practices shall be directed and through which they shall move. Business executives find a real and vital need for men and women who are not only versed in business but who also can offer a background of training in the legal principles involved in business. The student so equipped will bring to his position an advantage which will be of inestimable value.

* See notes at bottom of page 28.

This four-year degree program provides a sound and basic knowledge of those principles of law and of business which are so essential for success in various fields of business. The program meets particularly the needs of the following groups:

- 1 Employees of banks and trust companies;
- 2 Insurance officers and claim adjusters;
- 3 Real estate operators;
- 4 Accountants;
- 5 Those engaged in executive positions in business and industrial organizations.

The program is primarily a business program of study covering law only as it relates to business procedure and operation. It does not prepare the student for bar examinations nor is it planned to make it possible for the business executive to dispense with the services of attorneys. It makes it possible, however, for the executive to understand how the present intricate net of legal rules and regulations affects his business undertaking.

The cases selected for study are chosen not only for their value in developing an understanding of the law involved, but also for their very practical application to every-day business. They are primarily business cases and a knowledge of business and its problems and procedures is obtained at the same time the student learns about legal principles.

The law courses are conducted by practicing attorneys. In order that students may gain an adequate knowledge of the law and may develop effectively the powers of legal analysis, the case method of instruction generally used in schools of law is employed.

Students desiring to obtain the degree of Bachelor of Business Administration in Management may do so by completing two additional years of work. The actual courses pursued will depend somewhat upon the objective of the student, and have been selected with a view to supplementing the work completed in the Law and Business Management program.

**REQUIREMENTS FOR THE
DEGREE OF BACHELOR OF
COMMERCIAL SCIENCE IN
LAW AND BUSINESS
MANAGEMENT**

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
L 4-5	Business Contracts	5
L 6	Agents and Agencies	2½
L 7	Insurance of Business Risks	1½
L 8	Torts and Crimes in Business	1
L 10-11	Business Organizations	5
L 12	Law of Sales	2½
L 13	Trade Regulation	2½
L 14-15	Rights in Private Prop- erty	5
L 16	Taxes and Taxable In- terests	2½
L 17	Labor Relations	2½
L 18-19	Law of Financial Organ- ization	5
L 20	Rights of Debtors and Creditors	2½
L 21	Government Regulation of Business	2½
A 5-6	Accounting Aids to Management	5
Ec 1-2	Business Economics	5
M 1-2	Business and Industrial Management	5
	Electives (to be selected subject to approval)	5
Total Semester Hours Required for Degree		60

The courses and hours listed are those offered in Boston. *For courses available in the Divisions in Worcester and Springfield, consult the Divisional offices in those cities.*

The normal period of attendance for this program is four years, thirty-three weeks each year, three evenings each week and two hours each evening, except for those who enter with advanced standing credit. Those who wish to attend less than three evenings a week may do so and take a longer period of time to complete their programs.

* See notes at bottom of page 28.

ENGINEERING AND BUSINESS PROGRAM

The Engineering and Business curriculum offers basic training by combining fundamental engineering and business courses in a six-year degree program. It provides reliable training for those now engaged in or who plan to enter positions of managerial responsibility in industrial or commercial enterprises where a scientific or engineering background is required.

Many technically trained men find it impossible to assume greater managerial responsibility because they do not have a knowledge of fundamental business principles so essential in many of the better positions in industry. On the other hand, many business trained men are employed in industrial plants where a scientific background is most desirable if not necessary for advancement. This program has been developed to serve both groups.

In Boston, the Engineering courses in this program are given under the auspices of an affiliated school of Northeastern University, the Lincoln Technical Institute, which offers several four-year curricula in Engineering leading to the title of Associate in Engineering. The business courses are conducted by the School of Business which awards the degree of Bachelor of Business Administration in Engineering and Management.

The required business courses are largely in the field of industrial management and are designed to supplement the engineering work of the student. A careful study is made of the fundamental manufacturing processes, factory organization, production design, methods of production and production control, and time and motion study.

Students pursuing a program of engineering and business subjects ordinarily complete the work required for the title of

Associate in Engineering before starting business study. The following minimum credits and courses are required to meet degree requirements.

**REQUIREMENTS FOR THE
DEGREE OF BACHELOR OF
BUSINESS ADMINISTRATION
IN ENGINEERING AND
MANAGEMENT**

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
	Lincoln Technical Institute courses	55
A 5-6	Accounting Aids to Management	5
E 6	Business Reports and Conferences	2½
E 7, 8	Business Readings or T 3-4, Thesis	5
Ec 1-2	Business Economics	5
Ec 3-4	Financial Organization	5
M 1-2	Business and Industrial Management (May be offered for credit toward the title of Associate in Engineering)	5
M 3	Principles of Production	2½
M 4	Scientific Management	2½
M 6	Purchasing	2½
M 9-10	Industrial Management Problems and Policies	5
	Occupational Experience	30
Total Semester Hours Required for Degree		125

In the Worcester and Springfield Divisions, more general programs with a mechanical engineering major are offered. The degree granted is the Bachelor of Business Administration in Engineering and Business.

For more detailed information, consult the special booklets issued by the Lincoln Technical Institute in Boston or by the Divisions in Worcester and Springfield.

* See notes at bottom of page 28.

SPECIAL PROGRAMS AND SINGLE COURSES

Special one-year, two-year, or longer programs may be arranged to meet the needs of any student who does not find in the regular programs offered by the School the type of training desired.

Such programs must be approved by the Dean and are made up only from courses offered in the Evening Division of the University.

Any course may be taken singly or in combination by those who have the neces-

sary preliminary training to pursue with profit the course or courses selected.

Students should consult the schedules of courses offered in Boston and in the Divisions for a list of available courses. Full credit may be allowed for any of these courses, if the student taking a special program desires to become a candidate for a degree or title, provided the courses he has pursued are a part of the degree or title program chosen.



A Conference group discusses Management Policies, following an analysis by the Instructor

*A double number, as M 1-2 or A 7-8, indicates a full-year course covering both the first and second semesters. A single course number, as A 11, indicates a half-year course covering only one semester. The letters indicate the classification of the course as: A, Accounting; D, Distribution; Ec, Economics; E, English; L, Law; M, Management.

**Students in the Management Programs desiring more accounting than the single course of Accounting Aids to Management may elect both Introductory and Intermediate Accounting in lieu of Accounting Aids to Management. If Accounting Aids to Management is taken, Introductory and Intermediate Accounting cannot also be elected for credit, and vice versa.

ARRANGEMENT OF PROGRAMS
AND
SCHEDULE OF CLASSES



FOR THE SCHOOL YEAR
1940-1941

Evening Classes
for
Men and Women

NORTHEASTERN UNIVERSITY
SCHOOL OF BUSINESS

360 HUNTINGTON AVENUE, BOSTON, MASSACHUSETTS

ARRANGEMENT OF PROGRAMS

The programs on this and the next page are outlined in order that the student may see the approximate order of the various subjects. The School reserves the right to change the order of courses when advisable, but in general they will be given in the order designated. Courses marked with a (1) are offered in the first semester and those marked with a (2) are offered in the second semester. All other courses run throughout the school year.

B.B.A. Degree Program in Accounting

Provides a thorough preparation for the C.P.A. Examination, general accounting work, and for executive and administrative responsibilities. The degree of Bachelor of Business Administration in Accounting is conferred upon completion of this program. Students pursuing this program ordinarily attend three evenings each week throughout the school year.

First Year

Introductory Accounting (1)
Intermediate Accounting (2)
Business English

Second Year

Accounting Problems
Income Tax Procedure
Business Economics

Third Year

Advanced Accounting Problems
Cost Accounting
Financial Organization*

Fourth Year

Auditing (1)
Constructive Accounting (2)
C.P.A. Accounting Review
Legal Aspects of Business

Fifth Year

Credits and Collections
Business Reports and Conferences (1)
Public Speaking (2)
Government Controls in Business*

Sixth Year

Business Statistics and Forecasting
Elective (10 semester hours. See catalog)

Associate in Accounting Program

The first four years of the degree program described above constitute a practical and intensive preparation for the C.P.A. Examination and for general accounting work. Students completing this shorter program are awarded the title of Associate in Accounting.

B.B.A. Degree Programs in Management

The student in these programs obtains an understanding of business and industry so that he can adapt himself readily to new situations as they arise and make needed adjustments because of his ability to think analytically and soundly through actual problems. These programs definitely aim to develop executive abilities. The degree of Bachelor of Business Administration in Management is conferred upon the completion of these programs.

Students pursuing these programs ordinarily attend three evenings each week throughout the school year, and may major in Merchandising or Industrial Management.

MERCHANDISING MAJOR

First Year

Business and Industrial Management
Marketing
Business English

Second Year

Business Economics
Accounting Aids to Management
Principles of Advertising (1)
Retail Store Advertising (2)

Third Year

Financial Organization*
Purchasing (2)
Psychology for Business and Industry (1)
Retail Store Management and Department Store Administration

INDUSTRIAL MAJOR

First Year

Business and Industrial Management
Marketing
Business English

Second Year

Business Economics
Accounting Aids to Management
Principles of Production (1)
Scientific Management (2)

Third Year

Financial Organization*
Purchasing (2)
Psychology for Business and Industry (1)
Industrial Management Problems and Policies

Fourth Year

Legal Aspects of Business
Business Reports and Conferences (1)
Public Speaking (2)
Principles of Selling (1)
Sales Management (2)

Fifth Year

Government Controls in Business*
Business Planning and Research
Credits and Collections

Sixth Year

Business Statistics and Forecasting
Business Administration Seminar
Elective (5 semester hours. See catalog)

Fourth Year

Legal Aspects of Business
Business Reports and Conferences (1)
Public Speaking (2)
Principles of Selling (1)
Sales Management (2)

Fifth Year

Government Controls in Business*
Business Planning and Research
Credits and Collections

Sixth Year

Business Statistics and Forecasting
Business Administration Seminar
Elective (5 semester hours. See catalog)

Associate in Business Administration Programs

Students completing the courses listed for the first four years of either of the degree programs in Merchandising Management or Industrial Management will have acquired a substantial background for executive work. Students completing either of these four-year programs are awarded the title of Associate in Business Administration.

B.C.S. Degree Program in Law and Business Management

This program provides a sound basic knowledge of those principles of law and business so essential for executive success. The degree of Bachelor of Commercial Science in Law and Business Management is conferred upon the completion of this program. Students pursuing this program ordinarily attend three evenings each week throughout the school year.

First Year

Agents and Agencies (1)
Business Contracts
Business and Industrial Management
Insurance of Business Risks (2)
Torts and Crimes in Business (2)

Second Year

Business Organizations
Rights in Private Property
Business Economics

Third Year

Law of Sales* (1)
Trade Regulation* (2)
Taxes and Taxable Interests (2)
Labor Relations (1)
Accounting Aids to Management

Fourth Year

Law of Financial Organization*
Government Regulation of Business* (1)
Rights of Debtors and Creditors* (2)
Elective (5 semester hours. See catalog)

B.B.A. Degree Program in Engineering and Business

This program offers training for managerial responsibility in engineering, industrial, and commercial enterprises where a scientific and business background is desired. The required Engineering courses are offered in the Lincoln Technical Institute, a technical school affiliated with and conducted by Northeastern University.

Students in this program may elect scientific courses in the following fields:

Aeronautical Engineering
Architectural Engineering
Chemical Engineering

Civil Engineering
Electrical Engineering
Mechanical Engineering

Structural Engineering

Individual student schedules are made in conference with the Deans of the Schools. The degree of Bachelor of Business Administration in Engineering and Management is conferred upon completion of this program.

(Information concerning this program will be mailed upon request.)

* Not offered in 1940-1941, but offered in 1941-1942. Where subjects are not offered in a given year, the schedules are so arranged that students take alternate subjects without loss of time or program inconvenience.

SCHEDULE OF CLASSES IN BOSTON

All classes meet from 7 P.M. to 9:05 P.M. with a five minute recess at 8 o'clock. Courses marked with a (1) are offered during the first semester and those marked with a (2) are offered in the second semester. All other courses run throughout the year.

<i>Evening</i>	<i>Subject</i>	<i>Opening Date</i>
	Accounting Aids to Management	September 16
	Agents and Agencies (1)	September 23
	Business Statistics and Forecasting	September 16
	Income Tax Procedure	September 16
<i>Monday</i>	Industrial Management Problems and Policies	September 16
	Insurance of Business Risks (2)	April 14
	Introductory Accounting (1)	September 23
	Intermediate Accounting (2)	February 3
	Marketing	September 23
	Torts and Crimes in Business (2)	February 10
	Business Administration Seminar	September 17
<i>Tuesday</i>	Business Organizations	September 17
	Credits and Collections	September 17
	Legal Aspects of Business	September 17
	Public Speaking (2)	January 28
	Business Economics	September 18
	Business and Industrial Management	September 25
<i>Wednesday</i>	C.P.A. Accounting Review	September 18
	Introductory Accounting (1)	See Monday
	Intermediate Accounting (2)	See Monday
	Labor Relations (1)	September 18
	Taxes and Taxable Interests (2)	January 28
	Accounting Problems	September 19
	Advanced Accounting Problems	September 19
	Business Contracts	September 26
<i>Thursday</i>	Business English	September 26
	Business Reports and Conferences (1)	September 19
	Investment Principles and Practice	September 19
	Psychology for Business and Industry (1)	September 19
	Public Speaking (2)	January 30
	Purchasing (2)	January 30
	Auditing (1)	September 20
	Business Planning and Research	September 20
	Business English	September 27
	Constructive Accounting (2)	January 24
	Cost Accounting	September 20
	Economic Development of the U. S. (2)	January 24
	International Economic Relations	September 20
<i>Friday</i>	Principles of Advertising (1)	September 20
	Principles of Production (1)	September 20
	Principles of Selling (1)	September 20
	Retail Store Advertising (2)	January 24
	Retail Store Management and Department Store Administration	September 20
	Rights in Private Property	September 20
	Sales Management (2)	January 24
	Scientific Management (2)	January 24

The University reserves the right to withdraw in any year any course for which less than twelve enrollments have been received.

School of Business

Description of Courses

THE UNIVERSITY reserves the right to withdraw, modify, or add to the courses offered, or to change the order of courses in curriculums as may seem advisable.

The University further reserves the right to withdraw in any year any elective or special course for which less than twelve enrollments have been received. Regular students so affected by such withdrawal will be permitted to choose some other course. In the case of special students a full refund of all tuition and other fees will be made.

Students in Boston and in the Divisions in Worcester, Springfield, and Providence should consult the schedule of classes in the respective city where they are to attend for information as to courses given during the present year.

All full-year courses are numbered with a double consecutive number and all half-year courses with a single number. The letter or letters immediately preceding the numbers indicate the classification of the course. The number of class sessions indicated for each course includes the final examination session.

ACCOUNTING (A)

Applicants for admission to the School who have had experience in accounting or bookkeeping or who have pursued systematic courses in institutions of less than college grade may take an examination for placement purposes in Introductory Accounting. Those who pass this examination will be admitted to Intermediate Accounting and may substitute an elective course in lieu of Introductory Accounting.

INTRODUCTORY ACCOUNTING

A 1-2 Thirty-three sessions; 5 hours' credit. No previous knowledge of bookkeeping or accounting necessary.

This course provides basic instruction for those who plan to specialize in accounting or for those who wish to enroll later for more advanced courses. Emphasis is placed upon proprietorship accounts, including books of entry, statements, business practices, adjustments, and an introduction to partnership accounts. Drill and practice work are required for proficient handling of simple accounting transactions.

INTERMEDIATE ACCOUNTING

A 3-4 Prerequisite: A 1-2, or the passing of a placement examination. Thirty-three sessions; 5 hours' credit.

A study of partnership accounting, including organization, dissolution, and liquidation of the partnership, major emphasis being given to the corporate form of accounts with special attention to manufacturing and trading activities. In addition to the drill and practice work on accounting technique, a mastery of basic principles of general accounting is required.

ACCOUNTING AIDS TO MANAGEMENT

A 5-6 Thirty-three sessions; 5 hours' credit. No previous knowledge of bookkeeping or accounting necessary.

A study of the broad background of accounting and business transactions so as to enable the student to analyze and interpret intelligently financial statements and other accounting reports. The course demonstrates the use of accounting in management and financial control. Emphasis is placed on the development of accounting fundamentals, preparation of financial statements, corporation and manufacturing accounts, evaluation of balance sheet items, analysis and interpretation of financial statements and other trends, and the use of accounting as an aid to management.

ACCOUNTING PROBLEMS

A 7-8 Prerequisite: A 3-4 Thirty-three sessions; 5 hours' credit.

Develops power of analysis in utilizing accounting data. Problems are used as the basis for instruction and discussion to cover the more advanced phases of financial statements and ac-

counts found in the more complex business organizations.

COST ACCOUNTING

A 9-10 Prerequisite: A 7-8 Thirty-three sessions; 5 hours' credit.

Acquaints the student with the relationship of cost accounting to management and administration control and shows how adequate cost systems may further the intelligent management of business enterprises. Numerous problems serve as the basis for a study of the various accounts, records, systems, and methods commonly used in modern cost accounting.

AUDITING

A 11 Prerequisite: A 7-8 Seventeen sessions; 2½ hours' credit.

Accounting facts and practices are analyzed to determine whether or not they conform to professional practice. The work of the auditor in relationship to professional requirements, the mechanics of auditing, and the preparation of reports and certificates are studied.

INCOME TAX PROCEDURE

A 13-14 Prerequisite: A 3-4 Thirty-three sessions; 5 hours' credit.

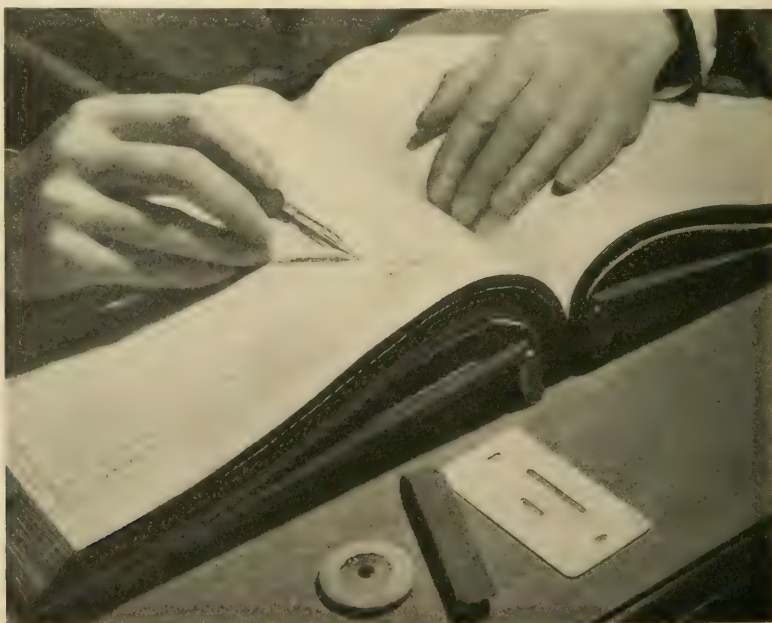
A detailed study is made of Federal and State tax laws, their administration and application to the incomes of individuals; partnerships, corporations, and fiduciaries; treasury and tax department regulations and rulings; and of the decisions of the Board of Tax Appeals, and of various Federal and State courts. Practice in making out reports and returns, and a study of the procedure of handling claims, form the basis of applied instruction.

CONSTRUCTIVE ACCOUNTING

A 15 Prerequisite: A 7-8 Seventeen sessions; 2½ hours' credit.

To acquaint students with the principles underlying the construction of accounting systems and the procedure of system installation. The course is developed by means of problem projects beginning with an analysis of the accounting needs of a small business. By gradual steps increasingly larger businesses are studied and accounting systems developed to meet their needs. Special attention is given accounting records in relation to the expansion of the accounting system.

A simple accounting transaction is the groundwork for proficiency as a C. P. A.



ADVANCED ACCOUNTING PROBLEMS

A 17-18 Prerequisite: A 7-8 Thirty-three sessions; 5 hours' credit.

This course is designed primarily to meet the requirements of those students who intend to enter the accounting profession or to assume responsibilities in commercial accounting. Emphasis in this course is devoted to specialized problems in connection with consolidations, mergers, holding companies, and other more advanced and complicated accounting situations. The course thoroughly prepares the student for the C.P.A. Accounting Review in final preparation for the State C.P.A. and American Institute examinations.

C.P.A. ACCOUNTING REVIEW

A 19-20 Prerequisites: A 9-10; A 11; A 17-18; L 1-2 Thirty-three sessions; 5 hours' credit.

This course provides a thoroughgoing and complete review of accounting theory and practice, and is intended primarily for those who contemplate taking the C.P.A. examinations. Practice in the classroom is provided under substantially the same conditions as exist in the C.P.A. examination room. Carefully selected problems, taken from C.P.A. examinations, in Accounting Theory and Practice are worked out in the classroom, and are supplemented by lectures, demonstrations, and test questions.

DISTRIBUTION (D)

Marketing enters into and influences every field of business and includes not only the direct process of the sale of goods, but the whole organization by which goods find their way from the original producer to the ultimate consumer. The change in the economic structure during the past ten years growing out of higher standards of living, the development of new occupational interests, and the shift of population to large cities, has tended to increase the cost of marketing of goods. Just as the elimination of waste in production was the keynote of business fifteen years ago, the reduction of expense and the introduction of more efficient methods in distribution are the foremost thought of business leaders today. For this reason courses in marketing form one of the basic elements in a business education.

MARKETING

D 1-2 Thirty-three sessions; 5 hours' credit.

An understanding of the various methods in common use for selling goods, and of the typical problems that arise in the course of distributing goods from the manufacturer through the middlemen and dealers to the consumers is provided. The selling problems of the manufacturer, the wholesaler, the retailer, and the specialty agent are studied in relationship to the various types of industries and commodities.

PRINCIPLES OF SELLING

D 3 Seventeen sessions; 2½ hours' credit.

This course deals with the evolution of modern salesmanship, its history, development and opportunities. The psychology of selling, preparation for the interview, the proper approach, arousing the buying urge, the meeting of sales resistance, the closing of the sale and the qualities of good salesmen are among the topics discussed.

SALES MANAGEMENT

D 4 Seventeen sessions; 2½ hours' credit.

This is a continuation of the course in the Principles of Selling. It includes study of the types of sales organizations, the work of sales executives, sales planning and policies, sales campaigns, management of the sales force,

financing of sales and the control of sales operations.

PRINCIPLES OF ADVERTISING

D 5 Seventeen sessions; 2½ hours' credit.

A comprehensive course designed to familiarize the student with the nature and scope of advertising and its place in the commercial and economic structure. History, definition, and functions of advertising. Organization and functions of advertising departments and advertising agencies. Varieties of advertising and media. Problems, market investigation, planning campaigns. Laws, ethics, and regulations. A study of the broader aspects of advertising with special emphasis on current trends and developments.

RETAIL STORE ADVERTISING

D 7 Seventeen sessions; 2½ hours' credit.

This course is devoted to the study of the elements of retail advertising. The various media used by retailers are considered with drill in the preparation of copy therefor. A study is made of institutional, straight merchandise, and sales copy as exemplified in current advertising of important retail concerns. The principles of layout receive attention as well as the mechanics of production including art work, plates, typography and printing. The aim is to furnish a practical foundation fitting students for a creative career in retail advertising.



The efficient direction of goods to the consumer is the primary aim of business today

ENGLISH (E)

The value that comes from the effective use of good English in business reports and communications is being increasingly emphasized by business leaders. All students who are candidates for the degree or certificate are required to pursue systematic courses in English. Those having outstanding deficiencies may be required to take additional courses in English.

BUSINESS ENGLISH

E 1-2 Thirty-three sessions; 5 hours' credit.

Efficient training is provided in the use of correct and forceful English for business purposes. Practice in the construction of sales, collection, credit and application letters, business articles, reports and newspaper stories provides opportunities for written expression on business topics. Study is devoted to the elements of logic as related to the organization and expression of thought. The course includes study of the fundamentals of sales promotion practice with special emphasis on buying motives. Oral work in class is intended to prepare students for participation in business conferences and public meetings.

ADVANCED ENGLISH

E 3-4 Prerequisite: E 1-2 or equivalent. Thirty-three sessions; 5 hours' credit.

Literature of value and interest to business men forms the basis of study and practice in writing so as to develop an effective easy style of expression. The student acquires a cultural basis which will serve not only as a source of entertainment in leisure hours but also an aid for business communications.

PUBLIC SPEAKING

E 5 Seventeen sessions; 2½ hours' credit.

Those who wish to speak convincingly, to overcome self-consciousness, and to develop self-confidence will find this course meeting their needs. Students are trained in the selection and organization of speech materials, the delivery of the speech, and in other important essentials of effective speaking. The entire course is practical and not theoretical. Work is centered around the interests and topics of business men and is specifically adapted to their needs.

BUSINESS REPORTS AND CONFERENCES

E 6 Seventeen sessions; 2½ hours' credit.

This course is devoted to the preparation and presentation of business reports and to the techniques of planning for, participating in, and conducting business conferences. These reports and conferences are based upon business problems and situations. The nature of a thesis, the selection of a subject, the preparation of an outline, the collection and organization of data are considered in this course. Students are given the fullest possible opportunity to participate actively at each session.

BUSINESS READINGS

E 7 and E 8; 2½ hours' credit for each course.

The two courses in Business Readings are designed to broaden the student's acquaintance with selected writings in the field of business and to introduce him to the real pleasure and values that come from such reading. There are no required lectures for these courses, each of which carries two and one-half semester hours' credit and for which a charge of ten dollars is made.

At the beginning of the Upper Middler and the Junior years, each degree candidate registers for a Readings course and is furnished a list of titles from which he makes selections for readings in accordance with the course requirements. Written reports are submitted on these readings, and are due on or before registering for classes the following year.

ECONOMICS (Ec)

Economics is the basic foundation upon which the general principles of business as a science are founded. A mastery of the underlying economic laws enables the student to see clearly the forces which business men must use in arriving at solutions to their problems. An appreciation and understanding of economics is a necessary factor in the equipment of a progressive business man.

BUSINESS ECONOMICS

Ec 1-2 Thirty-three sessions; 5 hours' credit.

The characteristics of modern business and industry are studied in terms of their operations and relationship to the modern economic system.

Economic laws and principles are considered in terms of business conditions peculiar to our own time and country and how these laws govern prices, wages of labor, profits, credit, competition, work and working conditions, and rewards for business enterprise.



The effectiveness of a written or spoken word is one measure of a man's business ability

FINANCIAL ORGANIZATION

Ec 3-4 Prerequisite: Ec 1-2 Thirty-three sessions; 5 hours' credit.

The functions and services of money and credit as mediums of exchange are discussed. A detailed study is made of the organization and functions of modern financial institutions such as commercial banks, trust companies, investment security houses, savings institutions, stock exchanges, the Federal Reserve System, and other credit and financial institutions.

INVESTMENT PRINCIPLES AND PRACTICE

Ec 5-6 Thirty-three sessions; 5 hours' credit.

Consideration is given to the determination of investment policies and to the analysis of various kinds of securities such as types of bonds, preferred and common stocks, and their place and use in the investment field. Attention is also given to the economic factors and changes as they affect investments.

BUSINESS STATISTICS AND FORECASTING

Ec 7-8 Prerequisite: Ec 1-2 Thirty-three sessions; 5 hours' credit.

The objective of this course is to train the student to use statistics in making better an-

alyses of the business problems than is possible without statistics. The point of view of the business man and not the professional statistician is maintained throughout the study. In the early part of the course the emphasis is placed upon the necessary technical methods, using business problems as illustrations; in the second part of the course, the point of view is changed and the emphasis is placed upon solving practical problems, using statistical methods as tools when necessary. The practical application of statistics to business is directed toward business forecasting, business budgeting, production and labor, market analysis, investment and financial analyses, and executive and management statistics.

ECONOMIC DEVELOPMENT OF THE UNITED STATES

Ec 9 Seventeen sessions; 2½ hours' credit.

A broad general survey is made of the economic and industrial development of the United States from the colonial period to the present time. Emphasis is placed upon the origin and development of American industries, changes in industrial and commercial policies, economic forces at work in business and social institutions, and upon problems arising from the growth and development of business and industry in the United States.

LAW (L)

Underlying the ever increasing complexity of modern business is a growing body of law which defines and directs business operations. Except for Legal Aspects of Business, all law courses employ the case method of study used in the country's leading schools of law. The courses listed below are available in Boston. For courses in law offered by the Divisions, consult the Divisional Offices.

LEGAL ASPECTS OF BUSINESS

L 1-2 Thirty-three sessions; 5 hours' credit.

A study of the application of legal machinery to the current needs and demands of modern business for facilitating organization, credit, finance, security or protection from risks, marketing, and commercial and industrial peace. The course also provides excellent preparation for the law phase of the C.P.A. Examination.

BUSINESS CONTRACTS

L 4-5 Thirty-three sessions; 5 hours' credit.

Their importance to the business man in the everyday conduct of his affairs; why contracts are necessary, how they are made and enforced; the subject matter of contracts, the rights and liabilities of the parties, the effect of failure to keep agreements, the effect of fraud, duress and

mistake; the termination of the contract relationship.

AGENTS AND AGENCIES

L 6 Seventeen sessions; 2½ hours' credit.

The importance of agents or business representatives in present-day business; how they are appointed; the legal relationships among agent, employer and third parties; the duration of the agency and the methods of terminating it.

INSURANCE OF BUSINESS RISKS

L 7 Eleven sessions; 1½ hours' credit.

The kinds of risks business men must assume and how some of these risks may be shifted to others; the formation and operation of insurance contracts affecting such risks as fire, explosion, transportation, theft, employer liability and interruption of business.



A section of
the University
Library

TORTS AND CRIMES IN BUSINESS

L 8 Nine sessions; 1 hour credit.

The responsibility of the business man for such common torts and crimes as trespass, libel, slander, deceit, nuisance and assault; precautions that may be taken to minimize claims against businesses arising from acts of the corporation, its officers or its employees.

BUSINESS ORGANIZATIONS

L 10-11 Thirty-three sessions; 5 hours' credit.

Problems of organizing various businesses; the forms of business enterprises, such as sole ownership, partnership, and the corporation; the powers and liabilities of business organizations and their officers; inter-corporate problems; rights of creditors and stockholders; problems of reorganization and the termination of a business organization's affairs.

LAW OF SALES

L 12 Seventeen sessions; 2½ hours' credit.

Formation of contracts to sell, the transfer of property rights, documents of title, risk of loss, rights and duties of buyer and seller, and remedies of the buyer and seller.

TRADE REGULATION

L 13 Seventeen sessions; 2½ hours' credit.

Fair competition, price regulation, disparagement of competitor's goods, trade boycotts, trade secrets, trade marks and trade names, tying con-

tracts, antitrust laws, the Federal Trade Commission and other governmental agencies.

RIGHTS IN PRIVATE PROPERTY

L 14-15 Thirty-three sessions; 5 hours' credit.

The nature and extent of ownership in personal property and real estate; rights represented by stock, bonds, patent rights and copyrights; the acquisition of real estate, rights and liabilities of owners, business leases, the landlord and tenant relationship, the transfer of ownership.

TAXES AND TAXABLE INTERESTS

L 16 Seventeen sessions; 2½ hours' credit.

Legal aspects of taxes as they affect the conduct of business; kinds of taxes, such as property taxes, excise taxes and income taxes; appeals of taxpayers; the taxation of corporations.

LABOR RELATIONS

L 17 Seventeen sessions; 2½ hours' credit.

The legal relation of employer and employee; the responsibility of employers for injuries, compensation legislation; competitive labor practices; unions, strikes, boycotts, blacklisting; modern legislation.

LAW OF FINANCIAL ORGANIZATION

L 18-19 Thirty-three sessions; 5 hours' credit.

Legal devices for raising money and extending credit, such as promissory notes, bills of

exchange, checks, trade acceptances, bills of lading, warehouse receipts; suretyship, guaranty, liens, conditional sales and mortgages.

RIGHTS OF DEBTORS AND CREDITORS

L 20 Seventeen sessions; 2½ hours' credit.

The property of the debtor which may be used for payment of his debts; modes of collecting on debtor's property; rights of creditors in bankruptcy and other legal actions.

MANAGEMENT (M)

With the complex and rapidly changing conditions of modern business, the functions of administration and management must be clearly defined and maximum economies effected. Through the problem approach, these courses train the student to supplant guesswork and trial and error processes with organized knowledge and proven management methods. Courses designated by the symbols M 3, M 4, M 6, and M 13-14 are offered in Boston only.

BUSINESS AND INDUSTRIAL MANAGEMENT

M 1-2 Thirty-three sessions; 5 hours' credit.

An introductory survey of the whole field of business and industrial administration with special emphasis upon training the student in the analysis of business and industrial problems. The functions of the business and industrial administrators are discussed with particular reference to the control policies and devices of the manager. The course presents the problems of business and industry as an interrelated whole and helps the student to see the lines of study which lead to solution of those problems.

PRINCIPLES OF PRODUCTION

M 3 Prerequisite: M 1-2 Seventeen sessions; 2½ hours' credit.

A basic treatment of the fundamental manufacturing processes. Topics studied include: factory organization, manufacturing and assembly sequences, selection and coordination of productive facilities, product design, inspection and salvage.

SCIENTIFIC MANAGEMENT

M 4 Prerequisite: M 3 Seventeen sessions; 2½ hours' credit.

The practical application of the principles of scientific management to production problems. The course embraces study in process research including time and motion study, standardization of materials, analysis of operations, methods of production, and production control including wage incentive systems.

GOVERNMENT REGULATION OF BUSINESS

L 21 Seventeen sessions; 2½ hours' credit.

Regulation of competition, problems of monopoly, government bureaus and their operation, trade practices, recent trends in state and federal legislation. The powers and practices of such regulative bodies as the Interstate Commerce Commission, the Federal Trade Commission and the National Labor Relations Board are studied in detail.

PSYCHOLOGY FOR BUSINESS AND INDUSTRY

M 5 Seventeen sessions; 2½ hours' credit.

Business psychology is the study of predicting and influencing human behavior in business. It provides an understanding of man's mental life, of how the individual and the group behave and are influenced in their behavior, and of how the business man may predict and control his own behavior and that of those with whom he works. The study and analysis of the student's own personal problems and behavior constitute a valuable and interesting phase of the course.

PURCHASING

M 6 Seventeen sessions; 2½ hours' credit.

A practical study of the functions and duties of the purchasing agent, the organization and administration of his department, and his relations with other departments. The following are representative of subjects discussed: the purchasing function, qualifications of the purchasing agent, selection of supply sources, purchasing policies and budgets, cataloging information, testing and inspection of purchases, and stores control.

CREDITS AND COLLECTIONS

M 7-8 Thirty-three sessions; 5 hours' credit.

This course furnishes instruction in the theory of credit, the workings of a Credit Department, whether in the wholesale or retail field, and in the analysis and use of credit statements as aids to efficient management.



An appreciation of the problems of Management fits Northeastern men for quicker advancement

INDUSTRIAL MANAGEMENT PROBLEMS AND POLICIES

M 9-10 Prerequisite: M 4 Thirty-three sessions; 5 hours' credit.

Co-ordination of the functional relationships which exist between the different departments of business with the problems affecting the determination of administrative and managerial policies is the purpose of this study. Special attention is given to scientific management of industry and business and to the co-ordination of production with purchasing, sales, finance, and transportation. Cases and problems dealing with organization and expansion, consolidation and combinations, reorganizations, internal administration, industrial and human relations, and governmental control form the basis of discussion and study.

GOVERNMENT CONTROLS IN BUSINESS

M 11-12 Thirty-three sessions; 5 hours' credit.

A study of the economic and political relationships which exist between business and government with particular emphasis upon the work of the Interstate Commerce Commission and the Federal Trade Commission; also other government agencies including the U. S. Departments of Agriculture, Commerce, Labor, and particularly the Bureau of Labor Statistics. Social as well as economic aspects of government control will be considered.

RETAIL STORE MANAGEMENT AND DEPARTMENT STORE ADMINISTRATION

M 13-14 Thirty-three sessions; 5 hours' credit.

Devoted to a careful study and analysis of the fundamental principles underlying the successful operation of retail stores. Among the topics treated are store location, types of store organization, merchandise control, store systems, receiving, marking, delivering, expense control, problems of general policy; the administrative and executive problems of the larger retail merchandising institutions; the organization and operation of the various departments of department stores including merchandising, operating, publicity, customer service, internal service, and personnel.

BUSINESS PLANNING AND RESEARCH

M 17-18 Prerequisite: Ec 7-8 Thirty-three sessions; 5 hours' credit.

This course is devoted primarily to a study of economic and business planning and to the technique of research and study in relationship to planning. The fundamental principles underlying the solution of research problems will be analyzed and students will be required to apply those principles to specific problems involving planning and research.

BUSINESS ADMINISTRATION SEMINAR

M 19-20 Prerequisites: A 5-6, D 1-2, Ec 3-4, Ec 7-8. Thirty-three sessions; 5 hours' credit.

This course provides the unique opportunity to use the information acquired from other courses in an intelligent intimate discussion of

live current problems which arise daily in marketing, production, and finance, with notes as to social significance. Emphasis is placed on the translation of problems out of the academic book atmosphere into the personal terms in which these problems must be met in business life and solved. Work is conducted upon a prepared individual conference basis.

THESIS (T)

BACHELOR'S DEGREE THESIS

T 3-4, 5 hours' credit.

Each candidate for the B.B.A. degree may submit a thesis or the Business Readings reports. The conditions to be fulfilled in connection with a thesis are:

1. The selection of the subject, preparation of the outlines, and the collection of data must be worked out in accordance with the requirements of the Committee on Theses.
2. Two typewritten copies of the completed thesis must be presented to the Dean, or the

Director in the Divisions, not later than March 15 of the year in which the candidate expects to graduate.

3. The thesis is expected to meet the equivalent of the work required in a full-year course. It is expected to give evidence that its writer has made a thorough study of the subject or problem selected, that he has marshaled the data in a businesslike manner, and has given evidence of his ability to reach sound and reasoned conclusions, and to present his findings in clear and convincing terms.

OCCUPATIONS

The School considers that the knowledges, skills, and experiences acquired in the full-time employment of its students are the equivalent in many respects to the work carried on in a laboratory. For this reason all members of the three upper classes who expect to qualify for the Bachelor of Business Administration degree must meet the occupational experience requirements listed below.

In order that this occupational experience may have the maximum educational value, the School maintains a Department of Vocational Guidance and Placement under the supervision of a competent Director. It is the responsibility of this Department to assist those students:

- a. who need advice and guidance about employment in business.
- b. who are unemployed and need placement service, and
- c. who are already employed but need to change their present employment connections in order to obtain the greatest possible benefit from their training and experience.

There is no tuition charge for the occupational courses listed below, even though they are required for the degree. Furthermore, all services of the Department of Vocational Guidance and Placement are without charge to the student.

ELEMENTARY OCCUPATIONS

O 1-2 10 hours' credit.

In this course students are required to meet with the Director of Vocational Guidance and Placement in groups or individually as he may direct, and to submit in the Upper Middler year a complete and detailed record of their employment for the college year. This report is one factor in evaluating the occupational experience credit of the student.

INTERMEDIATE OCCUPATIONS

O 3-4 10 hours' credit.

A continuation of O 1-2. Continuing guidance under the supervision of the Director of Vocational Guidance and Placement. Consideration of psychological and economic factors affecting vocations; vocational objectives. A complete report of the employment of the Junior year is required.

ADVANCED OCCUPATIONS

O 5-6 10 hours' credit.

A critical consideration of the student's present employment in the light of present-day occupational trends. Individual conferences with a view to vocational adjustments, if deemed desirable. A complete report of the employment of the Senior year is required.

School of Business

General Information

CLASSROOMS AND LIBRARIES

The classrooms are furnished with modern equipment and are thoroughly adapted to evening school work. Improvements in classroom facilities are constantly being made to meet the needs of the student body.

In connection with the General Library of the University in Boston a special section is devoted to books on business subjects. In addition, the leading trade and business magazines are available for student use. Additions are constantly being made to the business section of the Library in recognition of the new demands for business education and research. The reading rooms of the Library are open from 8.45 A.M. to 10 P.M. daily, Sundays from 2 P.M. to 9 P.M., holidays 12 M. to 9 P.M.

All members of the School in Boston are entitled to the privilege of using the Boston Public Library including the Business Branch at 20 City Hall Avenue. The same privilege is accorded students in the Divisions for the use of the libraries in their respective cities.

Appreciable libraries to which additions are constantly being made are available in the Divisions at Worcester, Springfield, and Providence.

TEXTBOOKS AND SUPPLIES

The Northeastern University Bookstore is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore. In addition, the Bookstore also carries a large number of general supplies. In Boston the main store is situated in the basement of the West Building.

In the Divisions, stores are located adjacent to the School Offices.

RECREATION AND OTHER ACTIVITIES

Men who are employed in offices or indoor occupations and who are pursuing a strenuous evening program of study should plan to take some systematic form of exercise in order that they may not impair their health and that they may do the most effective work.

Northeastern University is particularly fortunate in being able to place at the disposal of its students at moderate rates unexcelled recreational advantages. The Y.M.C.A. buildings have facilities in the nature of gymnasiums, swimming pools, bowling alleys, billiard rooms, game rooms, and social rooms where students obtain recreational privileges to their liking. Students may come from their work at the close of the day to the university building and enter a gymnasium class, take a swim, use the bowling alleys, or engage in other recreational pastimes before class time and thus renew their energy for the evening's work.

In addition, in the program of the various Young Men's Christian Associations will be found ample opportunities for religious, club, and other social activities.

Women students in the Worcester Division enjoy corresponding privileges at the Y.W.C.A.

STUDENT COUNCIL

The social and extra-curricular life of the School is in charge of Student Councils consisting of representatives from each class or school group. In addition to arranging for occasional social affairs, special lectures, and meetings, the council represents the interests of the student body. The faculty and the officials advise with the council in regard to school policies.

HONOR FRATERNITY

Sigma Epsilon Rho, the honor fraternity in the School of Business, has chapters in Boston and Providence. Its purposes are:

- 1 To promote acquaintance and good fellowship among those men who have attained highest scholastic standing in the School.
- 2 To stimulate the student body to higher scholastic accomplishment through the bearing, influence, and work of these selected men.
- 3 To develop methods of mutual improvement and advancement among the members of this fraternity.
- 4 To support high moral, professional and scholastic ideals.

Only students with honor standing are admitted to the fraternity. Admission is by invitation, after nomination by the School faculty.

In Boston an outstanding business book is awarded each year by Sigma Epsilon Rho Fraternity to the highest ranking student for that year in each of the Sophomore, Lower Middler, Upper Middler, and Junior Classes. Students will receive the award only in the event that they enroll for the subsequent year.

SCHOLARSHIPS, AWARDS, AND LOAN FUNDS IN BOSTON

The following scholarships and awards are available to students enrolled for a normal schedule of fifteen or more semester hours of class work who are pursuing a degree or certificate program in the School of Business in Boston. One-fourth of the scholarship is applied to the tuition of the recipient at each quarterly payment.

School of Business Honor Awards

A half tuition scholarship award is made each year to the highest ranking student of that year in the Junior, Upper Middler, Lower Middler, Sophomore and Freshman classes, who re-enrolls the following year for a normal schedule of study.

A quarter tuition scholarship award is made each year to the second highest ranking student of that year in the Junior,

Upper Middler, Lower Middler, Sophomore and Freshman classes, who re-enrolls the following year for a normal schedule of study.

To be eligible for either a half or a quarter tuition honor award, a student entering the School with advanced standing credit, except by examination, must have completed at least thirty semester hours of classroom work at the time the award is made.

The Clarkson-Alumni Scholarship

This scholarship, made available through the generosity of the Alumni Association of the School of Business in Boston, is in memory of George S. Clarkson, a member of the Class of 1914 and an instructor in accounting for many years. This scholarship, which is indeterminate in amount, is granted to the student who obtains the highest final grade in the course in Auditing unless he is eligible for an award of greater monetary value in which event the Clarkson-Alumni award will be made to the highest ranking student in Auditing who is not eligible for such an award. To be eligible for this scholarship the student must pursue a normal schedule the following year.

Kappa Tau Phi Scholarship

This scholarship award, amounting to thirty dollars, is made available by the Kappa Tau Phi Sorority. It is granted annually to the woman student who ranks highest in her class at the end of the Sophomore year unless she is eligible for an award of greater monetary value in which event the award will be made to the highest ranking woman student who is not eligible for such an award. To be eligible for this scholarship the student must pursue a normal schedule the following year. In determining this award grades of all courses completed in the Freshman and Sophomore years shall be considered.

Alumni Loan Fund

The Alumni Association of the School of Business in Boston has provided a loan fund which is available to students in the Senior and Junior classes in Boston who are in need of financial assistance in order to continue their studies. Applications for loans should

be addressed to the Dean of the School. All applications must be approved by the Alumni Loan Fund Committee.

School of Business Loan Fund

By vote of the Student Council a part of the Student Activities fees for 1937-1938 was set aside to provide a loan fund which is available to students temporarily in need of small loans for tuition or other School charges. Students needing assistance from this fund should confer with the Dean who administers it.

IN SPRINGFIELD DIVISION

The following scholarship and loan funds are available to students applying for, or admitted to, curricula offered by the Springfield Division of the University:

Junior Scholarship

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Junior Class who has made the highest average grade in all courses from his Freshman to Junior years inclusive. The scholarship is donated by Delta Chapter of the Pi Tau Kappa Fraternity.

Middle Scholarship

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Middle Class, School of Law, or to the Lower Middle Class, School of Business, who has made the highest average grade in all courses of the first three years. The scholarship is donated by Sigma Nu Upsilon Sorority.

Sophomore Scholarship

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Sophomore class who has made the highest average grade in all courses of the first two years. The scholarship is donated by Alpha Chapter of the Epsilon Phi Sigma Fraternity.

Freshman Scholarships

Awards in multiples of twenty dollars toward Freshman tuition are available to applicants for admission. They are made upon the basis of academic excellence for,

and at the termination of, the required previous academic training. One of these is granted to that student who, of the first ten in average for the school or college, as the admission requirement may necessitate, shall stand highest of the number from that institution who applied for admission in the subsequent fall to Northeastern University, Springfield Division.

Student Aid Fund

A limited fund originated by thoughtful undergraduates, augmented by certain faculty support, and the balance in a given year from student activities fees, from which meritorious students may obtain loans from time to time for tuition usage. It is administered by the Director of the Division. Applications for aid should be made through the Bursar.

IN WORCESTER DIVISION

Freshman Scholarships

Awards of \$50 toward Freshman tuition are available to graduates of several Worcester County high schools. They are made upon the basis of academic excellence for, and at the termination of, the full secondary school course. One of these is granted to that student who, of the first five in average for the school course, shall stand highest of the number from this group who anticipate admission the subsequent fall to Northeastern University, Worcester Division.

Sophomore Scholarship

A scholarship of \$50 is awarded at Commencement to that student of the Sophomore class who has made the highest average grade in all courses of the first two years, and who returns for the third year. The scholarship is applied toward the payment of the tuition of that year.

Senior Honor Award

An award of \$20 is made annually at Commencement to that student of the Senior class who has made the highest average grade in all courses from his Freshman to his Senior years, inclusive. This award is subject to certain regulations on file with the Governing Board of the Division.

School of Business

Administrative Policies

REQUIREMENTS FOR ADMISSION

All applicants whose credentials are approved by the Committee on Admissions, and who are admitted for degree or other programs are classified as regular or conditioned students.

1 Regular Students**

Applicants for admission as regular students must present evidence of the completion of an approved secondary school course, or the equivalent 15 units.*

2 Conditioned Students**

Applicants at least 21 years of age or those who will attain their twenty-first birthday during the college year and who do not meet the requirements for admission as regular students may be admitted as conditioned students provided they present satisfactory evidence of ability to profit by the work of the School.

Conditioned students may remove their admission conditions and be reclassified as regular students by using a, b, c, or a combination of a and b.**

a. By applying courses which they have completed in the School of Business or in another approved college or university at the rate of one unit for each two and one-half semester hours. A course cannot be credited both for the removal of admission conditions and for the degree.

b. By applying units for work completed in an approved secondary

school, or for work certified by an accredited certifying agency.

c. By action of the Committee on Admissions based upon all factors affecting the achievement and ability of the student in the School, when the student shall have completed the first thirty semester hours of work in his program; provided this work shall have been completed in not less than three years of attendance and with an average grade of not less than 70%. All conditioned students are required to take prescribed aptitude tests during the first year of attendance. These tests, for which no specific preparation can be made, are designed to test intellectual capacity and general fitness for college work rather than preparation in the specific subject matter of a secondary school program.

ADVANCED STANDING

Advanced standing credit in the School may be obtained in one or both of two ways, as follows:

1 By Transfer of Credit. Subject to the approval of the Administrative Committee, credit may be given for work completed in other approved schools, colleges, and universities. Applicants desiring credit by transfer should indicate their desire at the time the application for admission is filed. A copy of the

*A unit represents a year's work in any subject in any approved secondary school constituting approximately a quarter of a full year's work, or the equivalent. A four-year day high school course is regarded as representing at least 15 units of work, or 3 units in junior high school and 12 units in a three-year senior high school.

**For additional requirements for the Engineering and Business curriculum in the Worcester and Springfield Divisions, consult special bulletins or the Divisional offices.

catalog of the institution from which the transfer is sought should accompany the application for admission.

- 2 *By Examination.* Applicants who desire to secure Advanced Standing Credit by examination are required to apply in writing for examination in those subjects for which credit is sought. Proper forms should be obtained from the School Office and filed at the time the application for admission is filed. Applications for examinations are approved by the Committee on Administration who will take into account previous training, business experience, and other factors showing the applicants' special preparation and ability in the subject or subjects in which credit is sought by examination.

A grade of 75% must be obtained in an examination in order to secure advanced standing credit for the subject. Upon successfully passing an examination, the applicant is given full credit as though the subject had been pursued in the School.

The same subject cannot be offered both for admission credit and as a basis for advanced standing.

REGISTRATION

Before attending classes, students should report at the School Office for registration. Students are requested to assist in lessening congestion during the opening week by registering during the two weeks previous to the opening of the School.

Late registration for those unable to enter at the opening of the School year will be permitted at the discretion of the Dean, or the Director in the case of the Divisions.

CLASS SESSIONS

In Boston, Worcester, and Springfield classes are held each evening of the week except Saturday. In Providence, classes are held on Monday, Wednesday, and Friday evenings. The *normal schedule for students pursuing a degree, title, or certificate program is three evenings a week.* Students

may arrange their schedules so as to attend classes one, two, three, or four evenings a week depending upon the number of subjects taken. Students interested in the schedule of classes of any particular city should apply to the office of the school in the city in which they expect to attend.

NOTIFY THE OFFICE IMMEDIATELY

Of change of address.

Of withdrawal from any course — otherwise the fee for that course will be charged.

Of withdrawal from the School, giving date of the last session attended.

ATTENDANCE

The limited amount of time devoted to each subject and the rapid rate of progress in covering the essential content of a course make it highly desirable that students be present at every session. Because of the importance of regular attendance and its bearing upon the quality of scholarship, the policies governing attendance are:

- 1 Students who attend 75% or more sessions in a course are entitled to pass in that course if they attain a minimum final grade of D.
- 2 Students who attend between 50% and 74% of the sessions in a course are entitled to pass in that course if they attain a minimum final grade of C. Those who do not attain the minimum required grade of C may remove the condition only by means of a make-up examination in which they must receive a mark sufficient to raise the course grade to C.
- 3 Students who attend less than 50% of the sessions in a course will be considered ineligible to take the final examination or to receive any credit for the course.
- 4 Attendance credit is granted only when the student is in attendance at least three-quarters of the class period. Three separate absences of less than 30 minutes each constitute one complete absence unless such partial absences are canceled by satisfactory excuses.

OUTSIDE PREPARATION

It is expected that students will devote on the average two hours to preparation for each hour spent in the classroom. A student carrying a normal program of three evenings a week will, therefore, be expected to devote to outside preparation an average of eleven to twelve hours a week. Some courses require more time for preparation than others.

REGULAR EXAMINATIONS

The general policies governing regular examinations are:

- 1 A final examination will be held at the end of each course unless an announcement to the contrary is made.
- 2 The minimum passing grade in a regular final examination is D.
- 3 In case a student is excused from a final examination by the Administrative Committee, he may take the next regular or conditioned examination in the subject. The student who fails to complete a course within one year from the termination of that course must repeat the course, except that in special cases for justifiable cause, the Administrative Committee may waive this rule.
- 4 The student who has received a passing mark in a final examination and in a course may not take another examination for the purpose of raising his grade unless he repeats the course in its entirety.

CONDITIONED EXAMINATIONS

The following policies govern re-examinations:

- 1 Permission for taking a make-up examination is dependent upon the quality of the work which the student has done throughout the course and is a privilege which the Administrative Committee may grant to students who have received an E grade or an incomplete (Inc.).

- 2 The conditioned or make-up examinations are given in September. Students should consult the School Office for the specific dates of each examination.
- 3 Only one make-up examination in any given subject is allowed for the purpose of removing a conditional failure.
- 4 A make-up examination for purposes of removing a conditioned or incomplete grade must be taken within the next school year. In such cases students may take either the examination at the conditioned examination period or the final examination when next given if within a period of one year. A fee of \$2 is charged for each School of Business examination taken out of course.
- 5 A minimum grade of 65% is required on each make-up examination unless a higher minimum is specified by the Administrative Committee.
- 6 Whatever grade the student obtains on the make-up examination is credited as the final examination grade, but in no case can the final grade in the course be more than 70% except in the case of students who have been excused from taking the regular final examination.

TESTS

Four tests in full-year courses and two tests in half-year courses are regularly scheduled. These tests are regarded as a part of the term or course work. Since no make-up tests are given, students who miss a test should confer with their instructors regarding their status.

MARKS AND CREDITS

- 1 The following system of grading is in use:
Superior Work, A; Above Average Work, B; Average Work, C; Lowest Passing Grade, D; Unsatisfactory Work, E; Failure, F; Incomplete, Inc.

Students receiving an E, or unsatisfactory work grade, in an examination or as a final grade in the course, may remove the unsatisfactory grade by taking a make-up examination when it is next given, or at the time of the conditional examinations in September. The minimum passing grade of 65% is required on the make-up examination, unless a higher minimum is designated. In no case will a student taking a make-up examination be allowed more than a C for a final grade even though a higher grade may be obtained.

The policy is followed of mailing all grade and status reports to students instead of issuing these reports at the School Office or over the telephone.

- 2 A passing grade in a final examination as well as a passing final grade in the course is necessary in order to receive credit in the course.
- 3 Credit for one-half of a full-year course is not generally given, and in any event only upon approval by the Dean in advance of beginning the course.
- 4 In order to qualify for a degree, title, or a certificate the student must maintain a general average of C for the entire program. This is not interpreted to mean that each course must be passed with a grade of C, but that the average of all courses must be at least C. Grades of courses credited by transfer or by examination are not included in computing averages.

GRADUATION WITH HONORS

Honors are based upon the excellence of the work performed by the students in the School. Three honorary distinctions are conferred upon properly qualified candidates for the bachelor's degree upon graduation:

- 1 Highest honors to those who have completed all work with an average of 95% with no grade less than C.

- 2 High honors to those who have completed all work with an average of 90% with no grade less than C.
- 3 Honors to those who have completed all work with an average of 85% with no grade less than C.

These honors are subject to further conditions as follows:

- 1 To be entitled to honors a student must have completed a minimum of two full years of study in the School.
- 2 Courses credited by advanced standing whether by transfer or by examination will be eliminated in determining honors.

PROBATION AND DISCIPLINE

The Administrative Committee in dealing with students whose work in the School may be unsatisfactory or whose conduct is such as to make it inadvisable for them to continue as members of the student body, considers each case upon its individual merits. The following general principles are kept in mind in handling such cases:

- 1 Students whose scholarship in any given year is unsatisfactory may be dropped from the School or may be placed on probation with the privilege of spending a year in review.
- 2 When a student is placed on probation, the probation is formally imposed for a definite time and can only be extended by approval of the Administrative Committee.
- 3 The Administrative Committee has the authority to dismiss from the School or place on probation at any time or to strike off from the list of candidates for the degree, any student whom it may deem unworthy either on account of unsatisfactory scholarship or for any great defect of conduct or character. The Committee may ask any student to withdraw from the School who is obviously out of sympathy with the aims and ideals of the School.

School of Business

Tuition and Other Fees

MATRICULATION FEE

The University matriculation fee of \$5 must accompany the initial application for admission to the University. This fee is not refundable.

TUITION FEES

Tuition fees for courses in the School of Business are based on a charge of \$8 a semester hour.

Complete Programs

A student carrying a normal program of three full-year courses throughout the school year will complete fifteen semester hours of work for which the charge is \$120. This charge is payable in four payments of \$30, the first being due during the opening week of school and the other three during the weeks of November 18, January 20, and March 10.

Single Courses

The charge for each half-year course carrying two and one-half semester hours' credit is \$20, payable in two payments of \$10, and for each full-year course carrying five semester hours' credit, \$40, payable in four payments of \$10, except that payment for any course completed in one semester must be made during the semester in which the course is completed.

Deferred Payment Privilege

Students who would be denied the advantages of a systematic education if required to meet the tuition payments in the manner specified above, may make other payment arrangements with the Dean, if attendance is in Boston, or with the proper Divisional officer, if attendance is in one of the Divisions. A nominal charge is made for this service.

Courses in Other Departments of the University

School of Business students assigned to courses in other departments of the University are charged the tuition rates and other fees effective in the departments to which they are assigned.

LATE REGISTRATION

No reduction in tuition is made for late registration. A student is neither entitled to classroom privileges nor considered as registered and enrolled until tuition due has been paid or satisfactory arrangements made in person with the Dean, if attendance is in Boston, or with the proper Divisional officer, if attendance is in one of the Divisions.

STUDENT ACTIVITIES FEE

An activities fee is charged all students on the following basis:

\$1 for students enrolled for courses not exceeding five semester hours.

\$2 for students enrolled for courses exceeding five semester hours.

The fee is payable during the opening week in September. Students registering in the second semester pay the fee at the time of registration. It is administered by the University authorities in the interest of the students, and is used primarily to promote extra-curricular activities.

OTHER FEES

A fee of \$2 is charged for each make-up examination or advanced standing examination. This fee must be paid on or before the date of the examination.

A fee of \$10 is charged for each of the Business Readings courses. One half is payable with the September tuition pay-

ment and one half with the January tuition payment. This fee applies only to those who elect to submit Business Readings in lieu of a thesis, and is payable ordinarily during the Upper Middler and Junior years.

A thesis fee of \$20 is required of all degree candidates who elect to write theses. This fee is payable upon presentation of the thesis which is due not later than March 15 of the year in which the student expects to receive the degree.

The University graduation fee, charged to those who are candidates for a degree, is \$10, payable on or before May 1st of the year in which the student expects to graduate. A fee of \$5 is charged to all candidates for a title or certificate and is payable on or before May 1st of the year the program is to be completed.

EXPENSE FOR BOOKS AND MATERIALS

Students purchase their own textbooks and working materials. The cost varies according to the subjects for which the student is enrolled. The average cost for a normal program of three subjects is about \$13, with a maximum of approximately \$20. The textbooks for single courses range from \$1.25 to \$5.

GENERAL FINANCIAL INFORMATION

Checks should be drawn payable to Northeastern University.

Students who have withdrawn from a course for good cause and who are permitted to repeat it are credited with the tuition previously paid on that course, provided they re-enroll for the same course within the next two college years. The credit cannot be applied, however, until the balance due on the course has been paid.

Students are not permitted to attend class sessions or take any examinations or

tests until they have paid their tuition fees or have made satisfactory arrangements for payments.

Students will not be advanced in class standing, or permitted to re-enroll in the University, nor will degrees be conferred until all financial obligations to the University have been met.

No certificate of honorable dismissal will be issued to any student who has not fully met his financial obligations to the University.

WITHDRAWALS AND REFUNDS POLICY

In the event a student is obliged to withdraw from the School in which he is enrolled for causes deemed adequate by the Committee on Withdrawals, the balance of the tuition paid after the following deductions have been made will be refunded:

- a.* Four per cent of the total yearly tuition charge shall be deducted for each week of attendance or fraction thereof, in the event of enrollment for a full school year.
- b.* Ten per cent of the total tuition charged shall be deducted for each week of attendance or fraction thereof, in the event of enrollment for a semester.

The amount of tuition to be charged in the case of withdrawals shall be computed as indicated under *a* and *b* above from the date of each quarterly payment.

Matriculation, examination, thesis, and other fees are not refundable except that graduation and certificate charges will be refunded in case of non-qualification.

No refunds are granted unless the application for withdrawal is filed within forty five days after the student has ceased attendance.

School of Business

Degrees Conferred in 1939

BOSTON

BACHELOR OF BUSINESS ADMINISTRATION

ROBERT FREDERICK ANDERSON
ARTHUR OLAF CARLSEN
EVERETT DALE COOKSON
THOMAS HENRY DUFFY, JR.
JAMES THEODORE DWYER
EDWARD CUTHBERT EMSLIE
JAMES HENRY HUNTER
MARY CATENA LOVERME
OTTO CARLSON MASON
PAUL JOSEPH MASON

ADAM ALFRED MEDNIS
WILLIAM SYDNEY MICHAEL
ACHILLES CHARLES PENNA
WILLIAM JOHN PENNA
ELLIS MERTON PURINTON
FRANCIS JOSEPH SCHAEFER
GEORGE HAVEN SHARP
LEVERETT GLADING STANLEY
LOUIS WEINER

WITH HONOR

ROBERT WILLIAM CHERRY

ADELBERT JOSEPH GASCON

WORCESTER DIVISION

BACHELOR OF BUSINESS ADMINISTRATION

ROBERT NORMAN ARICK
JOSEPH FELDMAN

ROGER ANDREW PALMGREN
HAROLD GARDNER RUSSELL

SPRINGFIELD DIVISION

BACHELOR OF BUSINESS ADMINISTRATION

JEANETTE GLADYS BERMAN
LEON DRAYTON CHAPIN, JR.
DEANE STANLEY CLARK
EDMUND FRANCIS DABOROWSKI
VIOLET LILLIAN DESILETS
EDWARD RAYMOND DUPUIS
RUSSELL EDWARD KRAFT
HAROLD ARTHUR LEDUC

JOHN RAYMOND LESTER
MILDRED MAE LEZINSKI
STANLEY CLIFFORD MATHISON
JOSEPH WILLIAM MURPHY
KENNETH FRANCIS NOLAN
JOHN HERBERT RIFFELMACHER
ERNEST CARL SWANSON
STEPHEN WILLIAM WARWICK

WITH HONOR

ROBERT DONALD GOURLIE

PHILIP HOTCHKISS PORTER

PROVIDENCE DIVISION

BACHELOR OF BUSINESS ADMINISTRATION

CHARLES WILLIAM GALIANO
MALCOLM ARTHUR NEWTON
ELLIOT REVKIN
RICHARD MELVIN ROGERS

ARTHUR JOSEPH ROUSSEAU
JOSEPH SHORR
RANDALL WILLIAM TUCKER
OLIVER SEPTER WILBUR

School of Business

Register of Students, 1939-40

BOSTON

ALLARDICE, GEORGE M.	Boston	CADIGAN, FRANCIS X.	Dorchester
ALLEN, RUSSELL C.	Lexington	CADIGAN, JOSEPH W.	Boston
ANDERSON, A. SHERWOOD	Belmont	CALLAHAN, FRANCIS J.	Somerville
ANDERSON, ELLEN K.	Norwood	CALLENDER, ROBERT S., JR.	Boston
ANDERSON, FRANK T.	Medford	CARBONEY, LAWRENCE F.	Newton Center
ANDERSON, FRED L.	Beverly	CARLSON, RALPH F.	Watertown
ANDERSON, JAMES W.	North Scituate	CARROLL, ALFRED S.	Wellesley Hills
ANDERSON, ROY C. A.	Hyde Park	CASAVANT, ROBERT H.	Beverly
ANDREASIAN, GRACE D.	Lynn	CASPERSON, JOHN H.	Readville
ANDREWS, LEON E.	Southboro	CAVANAUGH, JOHN W.	Newtonville
ANTONELLI, JOSEPH C.	Newton	CAVE, ELEANOR S.	Dedham
ANTONELLI, PASQUALE	Boston	CHALFIN, JOHN	Dorchester
<i>B.S., Northeastern University</i>		CHASE, HARRY C.	North Quincy
ASH, MELVIN H.	Woburn	CHOD, STANLEY J.	Boston
ASH, VIRGINIA G.	Woburn	CHRISTIANSEN, EINAR H.	Malden
		CICCHETTI, ARTHUR E.	Beverly
BABIN, EDWARD J.	Dorchester	CIVILINSKI, MARY L.	Walpole
BAIN, WILLIAM R.	Somerville	CLARK, GEORGE J.	Lowell
BAKER, HARRY D.	Natick	CLARK, WILLIAM H.	Waltham
BAKER, MURIEL	Belmont	CLAYTON, GEORGE R.	Methuen
BALCH, EDWARD S.	Everett	CLEVELAND, FREDERICK C.	Auburndale
BAND, CHANNON	Malden	CLULOW, EDWARD D.	Boston
BANKOFF, EDWARD W.	Chelsea	COCHRANE, WALTER W.	Readville
BANKS, HAROLD V.	Belmont	COCKCROFT, LILLIAN M.	Everett
BARBATO, ALPHONSE W.	Watertown	COFFEY, JOHN R.	Weymouth
BARNETT, LOUIS H.	Malden	COFFIDIS, JOHN J.	Brighton
BARRESE, EDWIN G.	Somerville	COLKER, NORMAN	Mattapan
BARRETT, FRANK A., JR.	Brighton	COLLINS, FLOYD A.	Brockton
BARTHOLOMEW, DAVID E.	Winchester	COLOTTI, CARMINE J.	East Boston
BARTON, CHARLES S.	Beverly	CONDON, CHARLES R.	Cambridge
BEATON, ARTHUR K.	Allston	COOK, EDWARD M.	Arlington
BECKETT, ARTHUR E.	Medford	<i>A.B., Harvard University</i>	
BELSHUNAS, ANN M.	Hudson	COOK, HERBERT E.	Jamaica Plain
BELT, MARJORIE E.	Wellesley Hills	COOLY, ELEANOR L.	West Somerville
BENEDICT, WILLIAM C., JR.	Boston	COOPER, WALTER C.	West Medford
BERKOWITZ, MELVIN	Dorchester	CORAIN, NATALE	Swampscott
BERLIN, MORRY S.	Brookline	CORCORAN, ELEANOR J.	Arlington
BEYER, FREDERICK A., JR.	Hyde Park	CORCORAN, J. FRANK	Somerville
BIELAWSKI, EDMUND J.	Dorchester	CORCORAN, THOMAS E.	Cambridge
BIMBO, SABINO C.	Somerville	COREY, ROGER F.	Mansfield
BLAIR, BELMONT A.	Boston	<i>B.B.A., Northeastern University</i>	
BOETJE, GERARD H.	Dedham	CORLEY, THOMAS F.	Brookline
BOLTER, HARRY G.	West Newton	COSCIA, EUGENE A.	Revere
BOOKER, FORACE L.	Boston	COSTELLO, THOMAS J.	Arlington
BORISON, MELVILLE	Dorchester	COURSEY, C. HOMER	Boston
BORNSTEIN, BARNET	Dorchester	CRAY, JOHN J.	Malden
BOUCK, DELBERT	Saugus	CREIGHTON, WILLIAM J.	Malden
BOWERS, HAROLD B.	Concord	CRONIN, THOMAS V.	South Boston
BOWES, FREDERICK T.	Somerville	CROSBY, CLARENCE M.	Brookline
BOWLER, ARTHUR W.	Winchester	CROSBY, FRED R.	Hyde Park
BRAFORD, RAY E.	North Abington	CROSSEN, NICHOLAS C.	Roslindale
BRENNAN, JOHN J.	Somerville	CUDHEA, CARL B.	Hollis Depot
<i>LL.B., Northeastern University</i>		CULLEN, RICHARD F.	Boston
BRESLIN, FRANCIS J.	Allston	<i>B. of E.E., Rensselaer Polytechnic Institute</i>	
BRICK, HARRY A.	Boston	CURTIN, PAUL T.	Lynn
BRIDGHAM, ALBERT F.	Braintree	CUSHING, ARTHUR S.	Norwood
BRODECKI, ANDREW A.	Medford	CZYZEWSKI, BOLESŁAW A.	Chelsea
BROOKE, DAVID R.	Riverside, R. I.		
BROOKS, RICHARD W.	West Roxbury	DAGGETT, JAMES N.	North Cambridge
BROOKS, THOMAS W.	Lynn	DAHLBY, MILDRED A.	Quincy
BROWN, DAVID N.	Lynn	DALTON, FRANCIS P.	Lynnfield
BROWN, JOSEPH J.	Somerville	DANGIO, LOUIS	Waltham
BROWN, MILO F., JR.	Brookline	DANNER, FREDERICK	Dedham
BUCK, JOHN G.	Watertown	DANTZKER, PHILIP F.	Lynn
BUNTEN, ANDREW D.	Watertown	DAYALA, GEORGE A.	Watertown
BURNETT, LESTER J.	Malden	DAVENPORT, EDWIN H.	Medford
BURNS, JOHN E.	Charlestown	DAVENPORT, RALPH H.	Newton Center
BURRELL, ARTHUR E.	Boston	DAVIS, MARJORIE	Brockton
BURTON, LLOYD P.	Brookline	DECATUR, RICHARD G.	Needham
BUSH, ALLEN B.	Brighton	DECOT, JOFFE A.	Roslindale
BUTTRICK, WILLIAM R.	Cambridge	DECOURCY, DONALD J.	Lynn

DEVENS, CHARLES <i>A.B., Harvard College</i>	Milton	GOSS, RUDOLPH	Norwood
DICKINSON, M. JOHN, JR.	Melrose	GOTTLIEB, MORRIS J.	Dorchester
DiFRANCO, FRED A.	South Boston	GOUGH, ROBERT J.	Medford
DiNAPOLI, DONALD E.	Woburn	GREEN, GERTRUDE	Newton
DiVIRGILIO, JAMES V.	East Lynn	GREENE, GEORGE S.	Cambridge
DODGE, ROBERT W.	Bedford	GREENLEAF, ESTHER F.	Salem
DONAHUE, MYRTLE C.	Boston	GREGGERMAN, EDWARD B.	Dorchester
DONAHUE, WALTER J.	Medford	GROSSACK, ALEXANDER	Mattapan
DOORLY, PAUL H.	Stoneham	GUAY, CATHERINE E.	East Boston
DOWNES, GEORGE J.	Dedham	GUSTAFSON, HOWARD R.	Brockton
DOYLE, FRANK J.	Boston	HADLEY, HOWARD E.	Boston
DOYLE, JAMES J.	Medford	HADSELL, BEN J.	Boston
DOYLE, JOHN P.	Cambridge	HALEY, ANNA E.	Salem
DUFFY, JAMES A.	Brighton	HALL, LENNARD C.	Arlington
DUNBRACK, J. ELWOOD	Lynn	HAMILTON, JAMES C., JR.	Lexington
DUNLAP, SEDLEY F.	Boston	HAMILTON, ROGER A.	Lynn
DYSON, EDWARD	Milton	HANF, A. WALTER	Belmont
EAGERMAN, A. CHARLES	Roxbury	HANJIAN, NUBAR	Lynn
EAGERMAN, FRANK	Roxbury	HANSEN, CHRISTIAN E.	Quincy
EARLE, GORDON R.	Cambridge	HARKINS, KATHARINE M.	Charlestown
EDMONSTON, LESLIE M.	Wollaston	HARRINGTON, JOSEPH F.	Lynn
EGGERS, EARL H.	Framingham	HARRIS, PETER A.	Watertown
EIGEN, BARNEY	Roxbury	HART, JOHN E.	Bradford
EISENMAN, GERALD	Chelsea	HARTER, ROBERT J.	Boston
ELDRIDGE, MARCHANT W.	Arlington	HATHAWAY, A. HOMER, JR.	Wollaston
ELLIS, HERBERT C.	Swampscott	HAUSMAN, GEORGE	Newton
ELLIS, ROBERT E.	South Boston	HEFRON, PAUL E.	Brighton
ERBE, GUSTAVE	Waltham	HENDERSON, THERON S.	Malden
ERICKSON, WINNIFRED J.	Wollaston	HENDRIX, WILLIAM W.	Medford
ERRICO, LOUIS W.	Winchester	HENRY, ROBERT P.	Cambridge
EVANS, EDWARD W.	Watertown	HOAR, ADON R.	Beverly
EVERSON, LEIGHTON R.	Quincy	HOEFER, WILLIAM I.	Dedham
FALL, DAVID B.	Boston	HOLDEN, EARL R.	Attleboro
FARRELL, FREDERICK M.	Lynn	<i>B.C.S., Northeastern University</i>	
FAVALORO, THOMAS A.	Jamaica Plain	HOLMES, GEORGE W., JR.	Wollaston
FEATHERSTON, CHARLES M.	Newton	HONOHAN, MADELINE A.	Walpole
FEROLA, FRANCIS A.	Cambridge	HOPFE, JUSTIN G.	Newton
FERRARESI, FRANK L.	Somerville	HOPKINS, GEORGE H., JR.	Cambridge
FIELD, WENDELL D.	Lowell	HULBERT, L. WILLIS	Melrose
FINKEL, JULIUS	Roxbury	HUNT, CLIFFORD M.	E. Providence, R. I.
FLAHERTY, CATHERINE M.	Boston	HUNTER, HERMAN C.	Newtonville
FLAHERTY, JOSEPH	Woburn	HUNTER, THOMAS D.	Dorchester
FLETCHER, EUGENE C.	Swampscott	HURLBURT, ARTHUR S.	Medford
FONTAINE, LLOYD W.	Haverhill	HUTCHINGS, ALBERT R.	Newton Highlands
FORSGREEN, RALPH V.	Belmont	HUTCHINGS, LAWRENCE A.	Watertown
FORWARD, EDWIN M.	Framingham	HVOSLEF, ARTHUR M.	Hyde Park
FOSTER, THEODORE F.	Dorchester	HYDER, PHILIP N.	Boston
FRADKOFF, HERMAN	Boston	JACKSON, GEORGE J.	Dorchester
FRANK, LEO	Boston	JACKSON, IRENE C.	Boston
FREIWALD, FRITZ R.	Jamaica Plain	JACKSON, ROBERT W.	Melrose
FRITSCH, LOUIS H.	Cambridge	JENKINS, WALTER W.	Malden
GABELER, WILLIAM T.	Wellesley	JEZAK, WALTER M.	Lowell
GAEBLER, DR. WILLIAM C. <i>M.D., New York Medical College</i>	Foxboro	JOHNIDES, CONSTANTINE J.	Boston
GAMBLE, LAWRENCE E.	Beverly	JOHNSON, CARL E.	Arlington
GAMMONS, ALBION F.	Methuen	JOHNSON, ERNEST C.	Boston
GANNON, ROBERT F.	Brighton	<i>L.L.B., Northeastern University</i>	
GARABEDIAN, JOHN S.	Holbrook	JOHNSON, LEONARD V.	Swampscott
GARR, STUART L.	Dorchester	JOHNSON, PAUL	East Milton
GASCON, ADELBERT J.	Boston	JOHNSTON, FRANCIS	Brighton
<i>B.B.A., LL.B., Northeastern University</i>		JONES, FRANK L., JR.	Milton
GATELY, CHARLES L.	Haverhill	JOYCE, JOSEPH S.	Jamaica Plain
GEHARD, LEONARD JR.	South Weymouth	KAMBERELIS, JOHN	Haverhill
GEMELLI, JOSEPH C.	Dorchester	KARP, JACOB	Salem
GERMANIC, MORRIS	Boston	KATZ, SAMUEL	Brookline
GERRISH, WINSLOW F.	Melrose	KAULBACK, HAZEN M.	Malden
GIAMPAPA, VINCENT J.	Medford	KEACH, ALFRED C.	Somerville
GIFFEN, RONALD H.	Somerville	KEEFE, DAVID	Lynn
GILBERT, ALLISTER C.	Watertown	KEELER, EVERETT B.	Brighton
GILES, FREDERICK A., JR.	Milton	KEHOE, THOMAS P.	Dorchester
GINSBURG, CARLETON	Brookline	KELLEGREW, RAYMOND S.	Cambridge
GLIDDEN, HERBERT W.	South Braintree	KELLY, JOSEPH M.	Newton Center
GLOWACKI, WALTER W.	Lawrence	<i>L.L.B., Northeastern University</i>	
GODFREY, LAURIS S., JR.	Jamaica Plain	KENNEDY, KATHRYN A.	Somerville
GODFIELD, MAURICE H.	Chelsea	KENNEY, WILLIAM J., JR.	Brookline
GOLDFINE, ISRAEL	Malden	KETCHUM, RICHARD J.	Hingham
GOLDING, RALPH O.	Mattapan	KEYES, MARGARET M.	West Medford
GOODMAN, PHILIP H.	Roxbury	KIDD, WILLIAM	Boston
GOODRICH, EARLE A.	Cambridge	KILROY, EDWARD T. J.	Dorchester
GOODWIN, PAUL E.	Boston	KING, RICHARD M.	Weymouth
GORDON, JACOB M.	Dorchester	KLOSE, STANLEY F.	Lynn
GORE, BERNARD L.	Everett	KNOWLES, DOUGLAS	Lynn
		KOE, ARTHUR W.	Dorchester
		KONETZKY, E. WALTER	Roslindale

KOPIECKI, ALBERT D.	Lynn	McNEIL, JAMES J.	Auburndale
KUBIAK, GEORGE	Chelsea	McNEILL, ARTHUR E.	Somerville
KUDZI, ALEXANDER	Lynn	McPHERSON, EDWARD J.	Milton
KUEMPEL, PETER	Boston	McVINNEY, FRANCIS P.	Hyde Park
KULLBERG, WINSTON A.	Somerville	MEAD, JOHN S.	Milton
KUNDSIN, THEODORE J.	Boston	MEEHAN, JAMES M.	Charlestown
LaCOGNATA, EMANUEL J.	Methuen	MELANSON, FRANCIS G.	Lynn
LADD, WALTER I.	Weston	MELOY, WILLIAM H.	Boston
LaFRENIERE, JOSEPH F.	Boston	MEYERS, HARRY J.	East Dedham
LALLY, WILLIAM E.	Boston	MICHAELSON, ELIOT D.	Dorchester
LANDRY, GEORGE A.	Arlington	MIHALOPOULOS, LAMEROS A.	Roxbury
LANES, EARLE E.	Lynn	MILGROOM, THEODORE	Brookline
LaPLANTE, ETHEL S.	Boston	MINICHELLO, ARTHUR F.	East Boston
LARSON, LENNART J.	Somerville	MITCHELL, DOUGLAS F.	Lynn
LAUZON, LEONARD G.	Lynn	MITCHELL, JOHN F.	Marlboro
LAWRENCE, ARNOLD W.	Dedham	MONAC, E. JOSEPH	Dorchester
LEADBETTER, ROGER A.	Belmont	MONGEAU, ARTHUR R.	Malden
LEE, TAO TING	Boston	MONTGOMERY, MURDO	Boston
<i>LL.B., Sun yat-sen University</i>		MOODY, RICHARD P.	Arlington
LENNON, JAMES B.	Lincoln	MOORE, RALEIGH J.	Malden
LENOX, NORMAN	Dorchester	MORAN, EDWARD F.	Watertown
LETHBRIDGE, WILLIAM J.	West Roxbury	MORANO, MICHAEL	East Boston
LEVIN, HAROLD	Dorchester	MORASH, WALTER H.	Watertown
LEVINE, IRVING N.	Malden	MORRIS, WARREN W.	Cambridge
LEVINE, PAUL	Roxbury	MOSCA, JOHN	Lawrence
LEVISON, MALCOLM B.	Brookline	MOSCOFIAN, SIMON	Chelsea
LIEBKE, GEORGE D.	Somerville	MOSSMAN, DONALD G.	Somerville
LIEBMAN, DAVID I.	South Sudbury	MOULTON, LEROY N.	West Peabody
LIEHR, HERMAN P.	Arlington	MUDGE, ELIZABETH W.	Belmont
LIGHT, GALEN D., JR.	Belmont	MUEHLBERG, WALTER K.	Malden
LIGHTBODY, JOHN R.	Framingham	<i>B.B.A., Northeastern University</i>	
LIND, KENNETH J.	Newton Center	MULLEN, CHARLES J.	Reading
LINNEKIN, PHILIP E.	West Somerville	MURPHY, JOHN J.	Jamaica Plain
LIVERMAN, ROBERT G.	Roxbury	MURPHY, RICHARD F.	Jamaica Plain
LOFGREN, RICHARD J.	Dorchester	MURRAY, GLEN J.	Boston
LOJKO, HELEN M.	Salem	MURRAY, JOSEPH P.	Wollaston
LOTHROP, JAMES K., JR.	Needham	MYRSTEIN, LEON	Roxbury
LOWE, JOHN E.	Cambridge	MYETTE, ARTHUR F.	Malden
LUNDQUIST, EDWARD C.	Lynn	NADWORN, STEVEN C.	Lynn
LYNCH, WILLIAM F.	Dorchester	NAGLE, DAVID P.	Brighton
MacDONALD, ALLEN	Dorchester	NAGLIN, H. LAWRENCE	Dorchester
MacDONALD, ROBERT A.	Somerville	NAVVOY, ANTHONY F.	Chelsea
MacDONALD, WALTER G.	Watertown	NEWMAN, JOHN JR.	Roslindale
MacGREGOR, WILLIAM D.	Dorchester	NEWPOL, EDWARD	Roxbury
MacKAY, WILBERT F.	Somerville	NICOLOSI, CHARLES J.	Gloucester
MacLEOD, M. ROSS	Reading	NORTON, WILLIAM L.	Boston
MacNEILL, DONALD H.	Roxbury	NYQUIST, ELBERT A.	West Lynn
MacPHEE, ODIN H.	Lexington	OATES, JOHN P., JR.	Watertown
MacQUEEN, ALEXANDER L.	Milton	O'BERG, CLAYTON W.	South Boston
MacRAE, KENNETH A.	Somerville	O'BRIEN, JOSEPH A.	Somerville
MADDEN, JAMES M.	Dorchester	O'CONNELL, LENAHA	Boston
MAHLER, LOUIS H.	Brookline	<i>A.B., Boston College</i>	
MALLION, GEORGE A.	Lexington	<i>LL.B., Boston University</i>	
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BOYD, KARL W.
BRADLEY, CHARLES F.
BRAINARD, ELIZABETH B.
BRASSILL, THOMAS P.
BREMNER, THOMAS S.
BRESKY, JACK
BRISSETTE, PAUL R.
BROUILLETTE, ALFRED J.
BROWN, WINTHROP C.
BRUNDRETT, LAURENCE F.
BRZYS, EDWARD J.
BUCKLEY, JOHN E.
BUCKLEY, WILLIAM F.
BULLMAN, DANIEL T.
BURBANK, HERBERT A.
BURKE, JULIA M.
BURNETT, RAYMOND T.
BURNS, FREDERICK T.
BURNS, ROBERT H.
BURNS, MARK W.
BURRIDGE, GEORGE C.

Chicopee Falls
Springfield
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Springfield
North Wilbraham
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Holyoke
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Agawam
Holyoke
Easthampton
Springfield
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Florence
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West Springfield
Northampton
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West Springfield
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Thompsonville, Conn.
Holyoke
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Holyoke
West Springfield
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Springfield
Dorchester
Westfield
Springfield
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Springfield

CARLSON, ERNEST A.
CARLSON, FRANCIS A.
CARMELL, EDWIN E.
CARNES, PRESTON I.
 B.A., Yale College
CARON, JAMES R.
CARTMILL, NORMAN J.
CASLER, DOROTHEA M.
CHAMBERLAIN, GEORGE E.
CHANDLER, GORDON H.
CHECHILE, JOSEPH A.
CHISHOLM, DOUGLAS T.
CHRISTENSEN, ALBERT C.
CHRISTENSEN, PHILIP A.
CHRISTENSEN, WARREN C.
CIRCOSTA, FRANK A.
CIRILLO, FRANK D.
CIRILLO, JOHN B. F.
CIRILLO, JOSEPH A.
CLANCY, THOMAS D.
CLARK, HALLAM I.

B.S., Dartmouth College

CLAYTON, JAMES H.
CLEVELAND, ALICE M.
CLEVELAND, ARTHUR B., JR.
CLOWES, LAWRENCE G.
COLBERT, JOHN F.
COLLINS, ALLEN G.
CONANT, FRANK P.
CONNOR, FRANCIS B.
CONTI, LOUIS F.
COOK, DONALD B.
COOK, STANLEY E.
CORBERT, PAUL R.
COURTNEY, THOMAS E.
COX, NORMAN C.
CRAWFORD, JOSEPH D.
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CULLEN, ROBERT E.
CUNNINGHAM, RICHARD J.
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CURTO, FRANK J.
CURTIS, FRANK W.

DAY, ROBERT T.
DEANE, EDWARD R.
DELL 'OLIVO, ROBERT J.
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DIETZ, IRVING B.
D'IPPOLITO, MARIO
DIX, EDWARD L.
DOMAINGUE, HOMER T.
DONOGHUE, M. JOSEPH
DONOVAN, EUNICE G.
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DOWD, LESLIE I.
DOWD, MADELYN P.
DREWNIAK, THADDEUS J.
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DRISCOLL, ROBERT P.
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DUCLOS, IRVIN G.
DUNCAN, DAVID A.
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ELGER, M. EUGENE
ENOS, EDWARD E.
ENZOR, C. KIRK
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ERINAKIS, JOHN
EVANS, EDWARD E.
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[illegible]

Springfield
Holyoke
Holyoke
Indian Orchard
Springfield
Westfield
Southampton
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Chicopee Falls
Ludlow
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Palmer
Thompsonville
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Springfield
Willimansett
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Springfield

CAMERON, JEAN M.
CANDIDO, JOSEPH A.
CARL, ALFRED R.

Windsor Locks, Conn.
Springfield
Holvoke

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Springfield

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MOREY, DAVID F.	Northampton	SANDERSON, KENNETH	Palmer
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MORON, CASSIMERE J.	Chicopee	SANDY, HENRY R., JR.	Springfield
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MURPHY, ROBERT D.	Springfield	SCHNEELOCH, GEORGE R.	Springfield
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QUIGLEY, EDWARD H.	Chicopee Falls	SYMANYK, JOHN C.	Westfield
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RAY, KENNETH	Holyoke	TAYLOR, LEONARD W.	Hartford, Conn.
REED, HOWARD E.	Addison, Conn.	TAYLOR, RICHARD J.	Springfield
REGAN, JOHN J.	Westfield	TAYLOR, SCOTT F.	Springfield
REILLY, LAWRENCE A.	Springfield	TEBALDI, HENRY J.	Springfield
REYNOLDS, ALDEN C.	Indian Orchard	TEECE, JOHN T., JR.	West Springfield
REYNOLDS, JAMES N. F., JR.	Agawam	TEEHAN, GERALD T.	Springfield
REYNOLDS, STUART	Springfield	TESORO, EMANUEL	Springfield
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ROBERTS, WILLIAM, JR.	Holyoke	TONER, JAMES H.	Monson
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B.A., Harvard College		TOWNE, BRUCE D.	Longmeadow
M.B.A., Harvard Graduate School of		TURNBULL, DAVID L.	Springfield
Business Administration			

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		WILLIAMS, LESLIE F.	Springfield
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CHATALIAN, HARRY C.	Providence	GOLDBLATT, BURTON D.	Providence
CHOWANIEC, ALPHONSE	Central Falls	GRANDE, ALBERT	Providence
CLARK, RAYMOND G.	Saylesville	GRASSOLD, ELSE A.	Saylesville
CLOXTON, LUTHER E., JR.	Providence	GRAY, ALEXANDER, JR.	Providence
COFFEY, FRANCIS J.	Edgewood	GRAY, ARNOLD L.	Providence
COHEN, LEONARD P.	Fall River, Mass.	GREGORY, WALLACE	Providence

GRIMM, WALTER H.	Providence	MATTESON, ALTON R.	Providence
GUILBERT, PAUL E.	Woonsocket	MAYNARD, ROBERT W.	Pawtucket
HALL, ELIZABETH A.	Auburn	MCCOY, WILLIAM J.	Providence
HALLIWELL, FRED	Pawtucket	MCDONNELL, JAMES R.	Cranston
A.B., Brown University		MCBLOY, ROBERT W.	Pawtucket
HALPIN, EDWARD J.	Fall River, Mass.	MCGUIGAN, HAROLD C.	Bristol
HARGRAVES, RENNIE T.	Providence	MCNALLY, HERVEY V.	West Barrington
HARGREAVES, ALAN B.	Pawtucket	MCTERNAN, WILLIAM F., JR.	Providence
HARRISON, EVERETT T.	Woonsocket	MCWATERS, ROBERT A.	Providence
HAUN, EDWARD M.	Providence	MERK, HUGO	Providence
HAWKINS, WILFORD	Providence	MEYER, JOEL	Providence
HAWTHORNE, KENNETH A.	Providence	MILLS, GEORGE A.	Providence
HAYS, LAFAYETTE A.	Cranston	MIS, EDDIE F.	Warren
HELLEWELL, ARNOLD N.	Centerdale	MONA, ROBERT N.	Pawtucket
HIRST, ALEX H.	North Providence	MONTAQUILA, FRANK A.	Providence
HODGES, C. PRESCOTT	Providence	MORAN, JOHN	West Warwick
HOPKINS, EVA E.	Providence	MORRIS, CHARLES A.	Central Falls
HOROWITZ, HERBERT	Providence	MORRIS, PHILIP T.	Bristol
HORTON, RICHARD C.	Fall River, Mass.	MORRIS, WILLIAM H.	Providence
HOULE, LEONARD E.	Pawtucket	MULLIN, WILLIAM	Central Falls
HOUSTON, WILLIAM L.	Woonsocket	MUNDY, GEORGE J.	Slater'sville
HOWARD, JOHN	Pawtucket	MURRAY, FRED W.	Cumberland
A.B., Brown University	Providence	MURRAY, HAROLD C.	Providence
HULL, ROBERT F.	Edgewood	NELSON, ARTHUR W.	Providence
B.S., Rhode Island State College		NELSON, BERTIL	Providence
HUMMEL, JAMES W.	Washington	NEWTON, EDMUND H.	Providence
HYNES, THOMAS	Providence	NIXON, ROBERT B.	Pawtucket
IRONS, IRVING W., JR.	Providence	NOYES, ROBERT L.	Cranston
JAGER, ALVIN G.	Cranston	OAKLAND, J. ARTHUR	Pawtucket
JERAULD, ADRIAN E.	Providence	OAKLEY, LLOYD A.	Lonsdale
JOHNSON, AKE V.	Providence	A.B., Brown University	
JOHNSON, CLINTON S.	Providence	O'HARA, JAMES LOUIS	Providence
B.S., Brown University		B.S., Rhode Island State College	
JOHNSON, FRANCIS S.	North Providence	ORMEROD, ROBERT H.	Cranston
JOHNSON, GUSTAVE R.	East Providence	OTTEN, VERNON C.	Bristol
JOHNSON, HERBERT G.	Cranston	B.S., University of Pennsylvania	
JOHNSON, ROY V. J.	Cranston	PARENT, A. EDGAR	Woonsocket
JOHNSON, WILLARD G., JR.	Bristol	PAWLINA, JOSEPH	Woonsocket
JOHNSTON, DERWENT R.	Attleboro, Mass.	PEARSON, ALBERT V.	North Providence
JONES, HOWARD WEBSTER	Woonsocket	PEARSON, N. HARVEY	Providence
JOOST, FREDERICK B., JR.	Providence	PENKALA, JOSEPH E.	Warren
KEEFE, CLIFFORD W.	Providence	PENKALA, STANLEY F.	Warren
KELLEY, BRUCE I.	Providence	PETERSON, HERMAN A.	Lincoln Park
KELLY, ROBERT R.	Providence	PETRUCCI, EDWARD	Johnston
KENT, ROBERT S.	Rumford	PETTELLA, DONATO E.	Providence
KENYON, HAROLD G.	Eden Park	PETTIS, HARRY D.	Pawtucket
B.C.S., Northeastern University		PHINNEY, DEANE I.	Providence
KESSLER, SANFORD B.	Providence	PIERPOINT, ALDEN M.	Providence
KILGUSS, PAUL F.	Providence	PRICOLA, ALFRED R.	Providence
KING, JAMES M., JR.	Newport	PROULX, GERARD C.	Central Falls
KINNEY, ELLIS F.	Providence	RAHANIAN, CARRIE A.	Pawtucket
KOCHHAN, JOSEPH E., JR.	Providence	RAY, ARNOLD S.	Providence
KULIK, FRANK J.	Pawtucket	REIGNER, DOROTHY L.	Providence
KULLBERG, RICHARD H. M.	Providence	RENIER, JOHN U.	Edgewood
KUSINITZ, MAURICE	Fall River, Mass.	A.B., Bowdoin College	
A.B., Brown University		RHODES, JOHN A.	Cranston
LABOISSONNIERE, ROLAND J.	North Providence	RICHER, JOHN B.	Pawtucket
LAGRECA, NICHOLAS J.	Georgiaville	RICHMOND, C. PRESTON	Providence
LANCASTER, HERBERT	South Attleboro, Mass.	RIETH, RALPH F.	Auburn
LANE, HAROLD L.	Providence	RINEBOLT, LEWIS G.	Seekonk, Mass.
Ph.B., Brown University		RITCHIE, GENE L.	Warren
LANNIGAN, FRANCIS W.	East Providence	ROBBINS, RUSSELL K.	Woonsocket
LAROCHE, EUGENE R.	West Warwick	ROBERT, LEO L., JR.	Providence
LARSON, AXEL G.	Providence	ROBERTS, COLIN A.	Providence
LEESON, ELIZABETH M.	Cranston	RODEVITZ, MICHAEL S.	Stillwater
LESHNER, KENNETH C.	Providence	ROSE, WILLIAM CHESTER	Woonsocket
LETOURNEAU, GEORGE J.	Central Falls	ST. LAURENT, CHARLES J., JR.	Providence
LEWIS, DINO J.	Newport	ST. LOUIS, CLAIRE M.	Pawtucket
A.B., Harvard University		SALISBURY, WALTER R.	Providence
LIFRAK, JOSEPH	Fall River, Mass.	SARRASIN, JOSEPH F.	Blackstone, Mass.
A.B., Harvard University		SCHULTZ, WILLIAM B.	Providence
LINDQUIST, LAMBERT W.	Providence	SCOTT, ROBERT S.	Norwood
LINTON, RUSSELL K.	Providence	SCRIBNER, HERBERT	Providence
LOGAN, MALCOLM H.	East Providence	SEEGAL, HARRY	Pawtucket
MACINTYRE, DONALD B.	Providence	SENERCHIA, PASCO R.	West Warwick
MALMBERG, PHILIP O.	Auburn, Mass.	SHARPE, ALBERT A.	Attleboro, Mass.
B.M.E., Northeastern University		SIMONINI, FREDERICK C.	Providence
MANALLY, ETTA J.	Providence	SMITH, IRVING E.	Ashton
MARCROFT, GEORGE E.	Providence	SMITH, WALTER E.	Pawtucket
MARTINS, JOHN S.	Warren	SORIERO, ALBERT A.	Providence
		LL.B., Northeastern University	

SOUTER, FRANK H.	Providence	TURNER, WILLIAM	East Providence
SPARROW, ROBERT E.	Providence	TUTTLE, JAMES GRANT	Cranston
SPEAKMAN, DONALD C.	Riverside	TYAS, HENRY W., JR.	Providence
SPEEL, JOHN KENTON	Cranston		
STODDARD, GORDON H.	Riverside	VIGEANT, GEORGE J., JR.	Woonsocket
STREJCEK, GEORGE	Providence	WALLACE, WILLIAM K.	Providence
STUART, JOHN M.	Providence	WALSH, LEO F.	Pawtucket
SULLIVAN, EDWARD E.	Pawtucket	WALTHER, GRACE B.	Riverside
SWANSON, MYRON G.	Providence	WARD, DOUGLAS S.	Pawtucket
		WATERMAN, HERBERT L., JR.	Providence
TAYLOR, JAMES A.	Longmeadow	WATERS, LAWRENCE G.	Providence
THOMASON, FRANCIS N.	Pawtucket	WAYSACK, MERREL R.	Newport
THOMPSON, EDWARD F.	Providence	WESTCOTT, CHARLES H., JR.	Edgewood
THOMPSON, WILLIAM J.	Providence	WESTCOTT, HENRY W.	Edgewood
<i>Ph.B., Providence College</i>		<i>B.S., Springfield College</i>	
THOMSON, RICHARD M.	Pawtucket	WHITE, JOHN F.	Providence
THORP, WILLIAM R.	Attleboro Falls, Mass.	WILMARTH, LOUIS R.	Attleboro, Mass.
TIERNEY, THOMAS J.	Pawtucket	WOODS, JANE	Manville
TODD, EDWIN J.	Central Falls		
TONGE, THOMAS ALLAN	Central Falls	YAGHJIAN, MARY	Providence
TOWNEND, IRA B.	Chepachet		
TULCHIN, ABRAHAM	Fall River, Mass.	ZAMBRANO, PAUL J.	Providence
TURNER, EDWARD W.	Providence		

NORTHEASTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Students may concentrate in any of the following fields: Biology, Chemistry, Economics-Sociology, English (including an option in Journalism), and Mathematics-Physics. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Diesel, Air Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Classroom study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

COLLEGE OF BUSINESS ADMINISTRATION

Offers six curricula: Accounting, Banking and Finance, Marketing and Advertising, Industrial Administration, Journalism, and Public Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

SCHOOL OF LAW

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

SCHOOL OF BUSINESS

Offers curricula through evening classes in Accounting, Management—with Industrial and Merchandising majors, Law and Business Management, and Engineering and Business leading to the degree of Bachelor of Business Administration in specified fields or the Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. Examinations. Shorter programs arranged. Co-educational.

EVENING COURSES OF THE COLLEGE OF LIBERAL ARTS

Certain courses of the College of Liberal Arts in the fields of English, Literature and the Social Sciences are offered during evening hours.

These courses constitute a three-year program equivalent in hours to one-half the requirement for A.B. or S.B. degree and provide general education and preparation for admission to the School of Law. Associate in Arts title conferred. Co-educational.

The Colleges of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

BOSTON, MASS.

All schools except
School of Law
360 Huntington Ave.

Telephone KENmore 5800
Connecting all schools

School of Law
47 Mt. Vernon Street
Near State House

WORCESTER, MASS.
766 Main St.
Tel.: Wor. 5-6101

SPRINGFIELD, MASS.
114 Chestnut St.
Tel.: Spr. 6-3681

PROVIDENCE, R. I.
160 Broad St.
Tel.: Gaspee 6357

Northeastern University

COLLEGE OF

LIBERAL ARTS

BULLETIN OF EVENING COURSES
ANNOUNCEMENT FOR 1940-1941



BOSTON, MASSACHUSETTS

For further information or an interview address:

EBEN O. SMITH, *Director of Evening Courses*
Northeastern University
College of Liberal Arts
360 Huntington Avenue
Boston, Massachusetts

OFFICE HOURS

Fall and Winter Schedule

Aug. 16, 1939 — June 18, 1940 and
Aug. 16, 1940 — June 16, 1941 incl.
Daily (except Saturdays and Sundays)
8:45 A.M. — 9:30 P.M.
Saturdays, 8:45 A.M. — 1:00 P.M. (During
September the office is open until 4 P.M.)

Summer Schedule

June 19, 1940 — Aug. 15, 1940
Daily (except Saturdays and Sundays)
8:45 A.M. — 5:00 P.M.
Saturdays, 8:45 A.M. — 12:00 M.
Tel.: KENmore 5800

NORTHEASTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS

Bulletin of Evening Courses

Coeducational



1940 : 1941



NORTHEASTERN UNIVERSITY

1. West Building 2. East Building 3. South Building 4. Outdoor Gymnasium
5. University Parking Areas 6. Boston Opera House

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COLLEGE OF LIBERAL ARTS

EVENING COURSES

CALENDAR

First Semester

1940	Sept. 9-13	Make-Up Examinations
	Sept. 9-21	Registration
	Sept. 16, Monday	Classes begin for Middlers and Seniors
	Sept. 23, Monday	Classes begin for Freshmen
	Nov. 11, Monday	Armistice Day (Classes suspended)
	Nov. 28, Thursday	Thanksgiving Day (Classes suspended)
	Dec. 23, Monday	Last Class before Christmas Recess
1941	Jan. 2, Thursday	First Class after Christmas Recess
	Jan. 6-10	First Semester Examinations for Middlers and Seniors
	Jan. 13-17	First Semester Examinations for Freshmen

Second Semester

1941	Jan. 13, Monday	Classes resumed for Middlers and Seniors
	Jan. 20, Monday	Classes resumed for Freshmen
	Jan. 27, Monday	Mid-Year Entering Class begins
	April 28-May 2	Second Semester Examinations for Middlers and Seniors
	May 5-9	Second Semester Examinations for Freshmen

Third Semester

1941	May 5, Monday	Classes resumed for Middlers and Seniors
	May 12, Monday	Classes resumed for Freshmen
	May 30, Friday	Memorial Day (Classes suspended)
	June 16, Monday	University Commencement (Classes suspended)
	June 17, Tuesday	Bunker Hill Day (Classes suspended)
	July 4, Friday	Independence Day (Classes suspended)
	July 21-25	Third Semester Examinations for all classes
	July 26-Sept. 20	Summer Recess

Northeastern University

THE NORTHEASTERN UNIVERSITY CORPORATION

ROBERT GRAY DODGE
Chairman

FRANK LINCOLN RICHARDSON
Vice-Chairman

CARL STEPHENS ELL
President of the University

GALEN DAVID LIGHT
Secretary and Treasurer

CHARLES FRANCIS ADAMS
WILMAN EDWARD ADAMS
ROGER AMORY
EARL D. BABST
ROBERT BALDWIN
ARTHUR ATWOOD BALLANTINE
GEORGE LOUIS BARNES
THOMAS PRINCE BEAL
FARWELL GREGG BEMIS
PAUL CODMAN CABOT
WINTHROP L. CARTER
WALTER CHANNING
WILLIAM CONVERSE CHICK
EVERETT AVERY CHURCHILL
PAUL FOSTER CLARK
SEARS B. CONDIT
ALBERT MORTON CREIGHTON
ERNEST BLANEY DANE
WILLIAM JAMES DAVIDSON
JAMES DEAN
HENRY STURGIS DENNISON
PAUL AUGUSTUS DRAPER
CHARLES FRANCIS EATON
LINDSAY ELLMS
JOSEPH BUELL ELY
FREDERIC HAROLD FAY
ALLAN FORBES
EDWARD J. FROST
FRANKLIN WILE GANSE
GEORGE PEABODY GARDNER, JR.
HARVEY DOW GIBSON
MERRILL GRISWOLD
HENRY INGRAHAM HARRIMAN
CHANDLER HOVEY
HOWARD MUNSON HUBBARD
MAYNARD HUTCHINSON

ARTHUR STODDARD JOHNSON
HALFDAN LEE
EDWARD ABBOTT MACMASTER
JOHN RUSSELL MACOMBER
JOSEPH PATRICK MANNING
HAROLD FRANCIS MASON
JAMES FRANKLIN McELWAIN
HUGH DEAN McLELLAN
FRED LESTER MORGAN
IRVING EDWIN MOULTROP
CLARENCE LUCIAN NEWTON
OLAF OLSEN
AUGUSTIN HAMILTON PARKER, JR.
GEORGE EDWIN PIERCE
ROGER PIERCE
MATTHEW POROSKY
FREDERICK SANFORD PRATT
HARRY WENDELL PROUT
SIDNEY RABINOVITZ
STUART CRAIG RAND
JAMES LORIN RICHARDS
CHARLES MILTON ROGERSON
ROBERT BILLINGS RUGG
LEVERETT SALTONSTALL
FRANK PALMER SPEARE
RUSSELL HENRY STAFFORD
FRANCIS ROBERT CARNEGIE STEELE
CHARLES STETSON
EARL PLACE STEVENSON
ROBERT TREAT PAINE STORER
FRANK HORACE STUART
EDWARD WATSON SUPPLE
BAYARD TUCKERMAN, JR.
ELIOT WADSWORTH
EDWIN SIBLEY WEBSTER
SINCLAIR WEEKS

Northeastern University and Affiliated Schools

STATISTICAL SUMMARY

1938—1939

	<i>Administrative Officers and Faculty</i>	<i>Students</i>
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	103	2112
College of Engineering		
College of Business Administration		
School of Law		
School of Business	50*	1461*
Evening Division of College of Liberal Arts	105*	1550*
	4**	33**
III. Schools affiliated with and conducted by Northeastern University:		
Lincoln Technical Institute	38	532
Lincoln Preparatory School	19	437
Huntington Day School for Boys		
Regular Term	16	171
Summer Term	10	146
	—	—
Total	353	6442
Less Duplicates	42	403
	—	—
	311	6039

*These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

**The Evening Division of the College of Liberal Arts admitted students for the first time in September 1938.

General Statement

NORTHEASTERN University is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

Founded in 1898, Northeastern University, from the outset, had as its dominant purpose the discovery of human and social needs and the meeting of these needs in distinctive and highly serviceable ways. While subscribing to the most progressive educational thought and practice, the University has not duplicated the programs of other institutions but has sought "to bring education more directly into the service of human needs."

With respect to program, Northeastern has limited itself:

- To offering, in its several schools, basic curricula from which non-essentials have been eliminated;
- To effective teaching;
- To advising and guiding students;
- To giving students the chance to build well-rounded personalities through a balanced program of extra-curricular activities.

The Northeastern Plan of Education is especially designed for the student who must earn while he learns. In the main, it consists of two definite types of education.

- Co-operative Educational by Day,
- Adult Education by Night.

The plan has been developed in such a way that experience in jobs with pay is utilized to help boys of limited financial resources secure an education and at the same time gain the maximum educational benefit from their practical experience. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan.

The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools — the Lincoln Schools and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, Marketing and Advertising, Journalism, Public Administration, and Industrial Administration. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws. It also conducts a graduate program in the evening leading to the degree of Master of Laws.
3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above, in the School of Business, and in the Evening Division of the College of Liberal Arts. The School of Business has curricula in Management — with Industrial and Merchandising majors, Accounting, Law and Business Management, and Engineering and Management. The School awards the Bachelor of Business Administration degree with specification and the Bachelor of Commercial Science degree in Law and Business Management. The College of Liberal Arts offers certain of its courses during evening hours constituting a program, three years in length, equivalent in hours to one-half the requirements for the A.B. or S.B. degree and providing a general education and prep-

aration for admission to the School of Law. The title of Associate in Arts is conferred upon those who complete this program.

4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions thoroughgoing methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a college level in various phases of engineering leading to the title of Associate in Engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

Location of University Buildings

Northeastern University is located in Boston, a city which is rich in education and cultural opportunities. The University center is on Huntington Avenue just beyond Massachusetts Avenue and opposite the Boston Opera House. Here on an eight acre campus are located the educational buildings of the University except that of the School of Law. The evening courses of the College of Liberal Arts are all held at the University center on Huntington Avenue.

West Building

The West Building at 360 Huntington Avenue contains over one hundred thousand square feet of floor space devoted to administrative and instructional purposes. On the first floor are the general administrative offices of the University. The University bookstore, the "Husky Hut" and the student checkroom are located in the basement. There are three large lecture halls and numerous classrooms and laboratories. The office of the Director of the evening courses of the College of Liberal Arts is located on the first floor of this building.

East Building

The East Building of the University is the educational wing of the Huntington Avenue Branch of the Boston Young Men's Christian Association. The library, classrooms, certain laboratories, and the gymnasium are located in this building.

South Building

The South Building of the University contains certain laboratories, a large lecture hall, and several classrooms.

Law School Building

The Law School Building, located at 47 Mt. Vernon Street, within sight of the State House, contains administrative offices, a library, classrooms, student lounges, and other facilities. It is utilized exclusively for Law School work.

Transportation

The University center is easily reached from the various railroad stations and from all points on the Boston Elevated System. Ample parking space is available for the use of students coming by automobile.

College of Liberal Arts

EVENING COURSES

OFFICERS OF ADMINISTRATION

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D.
President of the University

FRANK PALMER SPEARE, M.H., LL.D.
President Emeritus

EVERETT AVERY CHURCHILL, A.B., Ed.D.
Vice-President of the University

GALEN DAVID LIGHT, A.B.
Secretary-Treasurer of the University

WILFRED STANLEY LAKE, A.B., M.A., Ph.D.
Dean

EBEN OSWELL SMITH, S.B.
Director of the Evening Courses

J. KENNETH STEVENSON, B.C.S.
Assistant to the Vice-President

CHAIRMEN OF INSTRUCTIONAL DEPARTMENTS

CHARLES FREDERICK BARNASON, A.B., A.M., Ph.D.
Professor of Modern Languages
Res. 122 Downer Ave., Hingham

STANLEY GODDARD ESTES, A.B., M.A., Ph.D.
Professor of Psychology
Res. 60 Pinckney St., Boston

CHARLES WILLIAM HAVICE, A.B., M.A., S.T.B., Ph.D.
Professor of Sociology
Res. 83 Franklin St., South Braintree

WILFRED STANLEY LAKE, A.B., M.A., Ph.D.
Professor of Economics
Res. 59 Hinckley Rd., Waban

HAROLD WESLEY MELVIN, A.B., M.A.
Professor of English
Res. 44 Houston Ave., Milton

STANLEY DEMETRIUS MIROYIANNIS, S.B., M.A., Ph.D.
Professor of Biology
Res. 8 Cumberland St., Boston

CARL FREDERICK MUCKENHOUP, A.B., S.B., Ph.D.
Professor of Physics
Res. 332 Winchester St., Newton Highlands

NORRIS WHITFIELD POTTER, JR., A.B., M.A.
Associate Professor of History and Government
Res. 34 Medfield St., Boston

JOSEPH SPEAR, A.B., M.A.
Professor of Mathematics
Res. 31 Matchett St., Brighton

ARTHUR ANDREW VERNON, S.B., M.S., Ph.D.
Professor of Chemistry
Res. 30 Erie Ave., Newton Highlands

INSTRUCTORS

HAROLD J. ADLINGTON, A.B., A.M.
English Composition

THOMAS AUSTIN BRIDGES, B.S., A.M., S.T.B.
Introduction to Sociology
Principles of Sociology

NORMAN GREENE, B.Sc. in Ed.
Principles of Economics

J. KEENE HORNER, B.A., M.B.A.
Effective Speaking

HARRY KEMELMAN, A.B., A.M.
English Composition
Survey of English Literature

FRANKLIN NORVISH, S.B., M.A.
Effective Speaking

JOHN G. PINKHAM, A.B.
Labor Problems

MORRISON SHARP, A.B., A.M., Ph.D.
English and American Constitutional History

RICHARD POATE STEBBINS, A.B., A.M., Ph.D.
History of Civilization

MYRA EDNA WHITE
Librarian

MARY B. FOOR
Manager of the Bookstore

ELIZABETH BRECHEN HUNT
Secretary to the Director

CLASS SCHEDULE

1940-1941

The school year consists of two fifteen week semesters and a ten week semester.

Freshmen Class*First and Second Semesters*

		Semester Hours
E 1-A, 2-A	English I	6
H 1-2	History of Civilization	6
Gv 1-2	American Government and Politics	4
		—
		16

Third Semester

H-2	History of Civilization	2
E 13-14	Effective Speaking	2
		—
		4

Middler Class*First and Second Semesters*

Ec 3-4	Economic Principles	4
Ec 5	Economic Problems	2
E 15-16	Survey of English Literature	6
Gv 1-2	American Government and Politics	4
Ec 20	Public Finance	2
		—
		18

Third Semester

Ec 6	Economic Problems	2
S 3	Social Problems	2
		—
		4

Senior Class*First and Second Semesters*

Ps 1	Introduction to Differential Psychology	2
Ps 2	General Psychology	2
Gv 1-2	American Government and Politics	4
Ps 7	Social Psychology of Every Day Life	2
Ps 8	Social Psychology Theory and Methods	2
Ec 20	Public Finance	2
Ec 15	History of Economic Thought	2
		—
		16

Third Semester

S 3	Social Problems	2
S 7	Principles of Social Ethics	2
E 33	Modern Literature 1895-1915	2
		—
		6

GENERAL PROGRAMS

The General Education Programs are arranged so that students may concentrate in Economics, English, History and Government, and Social Science. All students take the same courses during their freshman year. During their middler and senior years they take the courses required of all students and the required courses in the field of concentration which they have elected.

The courses forming the Pre-legal Program are listed on the next page.

Figures preceding course name indicate course number.

Figures after course name indicate semester hours.

YEAR SEQUENCE	COURSES REQUIRED OF ALL STUDENTS	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN ECONOMICS	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN ENGLISH	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN HISTORY AND GOVERNMENT	ADDITIONAL REQUIRED COURSES FOR CONCENTRATION IN SOCIAL SCIENCE
I	E 1A-2A English I 6 H 1-2 History of Civilization 8 Gv 1-2 American Government and Politics 4 E 13-14 Effective Speaking 2				
II	Ec 3-4 Economic Principles 4 Ec 5-6 Economic Problems 4 E 15-16 Survey of English Literature 6 S-1 Introduction to Sociology 2 S-2 Principles of Sociology 2	E 20 Public Finance 2 Ec 7 Money and Banking or 2 Ec 11 Labor Problems 3	Ec 8-8 Advanced Composition 4 or Ec 26 American Literature 4	Gv 3-4 Comparative Government 4	S 3 Social Problems 2 S 4 Social Pathology 2 or Ec 11 Labor Problems 3
III	Ps 1 Introduction to Differential Psychology 2 Ps 2 General Psychology 2 Ps 7 Social Psychology of Every- day Life 2 Ps 8 Social Psychology, Theory. and Methods 2 S 7 Principles of Social Ethics 2 S 9 Problems in Social Ethics 2	H 13-14 English and American Con- stitutional History 6 Ec 15 History of Economic Thought 2 Ec 7 Money and Banking or 2 Ec 11 Labor Problems 2	Ec 23 Modern Litera- ture 2 H 9-10 American History 4 Ec 8-8 Advanced Com- position 4 or Ec 26 American Litera- ture 4	H 9-10 American History 4 H 13-14 English and American Constitutional History 6	S 4 Social Pathology 2 or Ec 11 Labor Problems 3 H 9-10 American History 4 S 11 Social Control 2 S 14 Urban Sociology 2
Total	50	15	14	14	15

SPECIAL PRE-LEGAL PROGRAM

Students planning to enter the School of Law are expected to complete a total of sixty-four semester hours of class work.

The schedule of courses making up this program is listed below:

First Year		<i>S.H.</i>	<i>S.H.</i>
E 1-A, 2-A	English I	6	
H 1-2	History of Civilization	8	
Gv 1-2	American Government and Politics	4	
E 13-14	Effective Speaking	2	20
		<hr/>	
Second Year			
Ec 3-4	Economic Principles	4	
Ec 5-6	Economic Problems	4	
Ec 20	Public Finance	2	
E 15-16	Survey of English Literature	6	
S 1	Introduction to Sociology	2	
S 2	Principles of Sociology	2	
Elective		2	22
		<hr/>	
Third Year			
Ec 15	History of Economic Thought	2	
Gv 3-4	Comparative Government	4	
H 13-14	English and American Constitutional History	6	
Ps 1	Introduction to Differential Psychology	2	
Ps 2	General Psychology	2	
S 7	Principles of Social Ethics	2	
S 9	Problems in Social Ethics	2	
Elective		2	22
		<hr/>	
Total			64

THE COLLEGE OF LIBERAL ARTS

Evening Courses

STATEMENT OF PURPOSE

The College of Liberal Arts through its evening courses offers several programs in general education and a pre-legal program preparing for admission to Northeastern University School of Law.

By conducting its classes at convenient evening hours, it gives high school graduates who are obliged to seek work immediately upon graduation an opportunity to continue their education. In general those who seek admission to the evening classes of the College of Liberal Arts are divided into two groups.

The first group is composed of those who wish to continue their education along cultural lines. The programs available afford to this group a general education, together with specialization in one of four fields: Economics, English, History and Government and Social Science.

The second group is composed of those who wish to prepare for admission to the School of Law. Under the rules of the Supreme Judicial Court in relation to the admission of attorneys in Massachusetts, an applicant is required to complete one-half of the work acceptable for a bachelor's degree in an approved college or university before he begins the study of law. The evening pre-legal program of the College of Liberal Arts is especially designed for those who wish to prepare for admission to either the day or evening division of the Northeastern University School of Law.

Increasingly the value of a broad cultural education is being realized. This is recognized in the pre-legal study required before admission to law school in nearly all states. It is also recognized in newly required courses of a cultural nature for accounting and engineering training. This cultural education is obtainable either before or after the completion of one's specific vocational training. Not only is a cultural education valuable in and of itself, but from a strictly vocational point of view it is highly important. The evening courses of the College of Liberal Arts are particularly valuable as many of them deal with basic principles which underlie business in general.

Finally, the courses offered will broaden the field of a student's interest. Through this broadening, an appreciation of many fields of knowledge will be obtained which will greatly enrich the student's personal living.

REQUIREMENTS FOR THE TITLE OF ASSOCIATE IN ARTS

Each evening course meets the same academic standards and carries the same semester hour credit as the corresponding course in the day program of the College of Liberal Arts. The courses, however, have been carefully selected to meet the needs of evening students.

The following requirements must be fulfilled by candidates for the title of Associate in Arts:

1. To be eligible for the title of Associate in Arts, a student must complete a total of not less than sixty-four semester hours of academic work with a degree of proficiency acceptable to the faculty.
2. Furthermore, a candidate for the title of Associate in Arts taking one of the general programs must meet the minimum field requirements listed below:

	Semester Hours Required
Economics	8
English	14
Government	4
History	8
Psychology	8
Sociology	8
Electives	14
	<hr/>
Total	64

3. A Candidate for the title of Associate in Arts who is preparing for admission to Northeastern University School of Law must complete all the required courses listed in the pre-legal program totaling sixty semester hours and in addition four semester hours chosen from any field.

The above requirements may be met by class attendance three nights a week, forty weeks each year for three years. This period may be extended over a longer period of time.

REQUIREMENTS FOR A.B. OR S.B. DEGREE

Any man who completes the requirements for the Associate in Arts title may become a candidate for a bachelor's degree in the College of Liberal Arts by completing an additional sixty-one semester hours of work and by meeting major, minor and language requirements in the Day Division.

The Day Division is open to men only.

ADMISSION REQUIREMENTS

Admission requirements are the same for the Day and Evening work in the College of Liberal Arts. However, both men and women are admitted to the evening courses while the Day College of Liberal Arts is restricted to men only.

Applicants for admission must qualify by one of the following methods:

1. Graduation from an approved course of study in an accredited secondary school.
2. Completion of fifteen secondary school units with a degree of proficiency satisfactory to the Department of Admissions.
3. Examinations—certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.

Regardless of the method used applicants for admission must present prescribed subjects in either Group A or Group B.

Group A		Group B	
English	3	English	3
*Foreign Language (Ancient or Modern)	3 or 4	Mathematics	2 or 3
Social Sciences	2	Natural Sciences	1
**Electives	6 or 7	**Electives	8 or 9
	<hr/>		<hr/>
Total	15	Total	15

*One year of a foreign language is not accepted. Therefore, this requirement may consist either of three years of one language or two years of each of two languages.

****Not less than four of the “electives” must be in one or more of the following academic branches: Languages, Natural Sciences, Mathematics, Social Sciences, History.**

GENERAL INFORMATION

Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have inadequate preparation in any of his prerequisite subjects, the faculty reserves the right to require the student to make up such deficiencies.

Application for Admission

The college year begins in September. Students are also admitted at the beginning of the second and third semesters to courses for which they have the required background.

Each applicant for admission is required to file an application blank setting forth his previous education and the name of one person to whom reference may be made concerning his character and previous training.

Inside the back cover of this catalogue is an application blank. It should be filled out in ink and forwarded to the Director of the Evening Courses of the College of Liberal Arts, Northeastern University, 360 Huntington Avenue, Boston, Massachusetts. Upon receipt of the application, the Director at once obtains the previous school records, the statement from the reference, and after considering these, informs the applicant as to his eligibility for admission.

Applications should be filed preferably before the registration period, thus allowing time to determine eligibility for admission and to adjust any schedule problems before the opening night. Applicants are urged to visit the school for a personal interview if it is possible for them to do so.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their application.

Registration

The filing of the application for admission does not constitute registration. All students are required to register at the college and arrange for the payment of their tuition during the registration period. (See calendar p. 4).

Attendance and Examinations

Attendance is required of all students at recitations and lectures continuously throughout the academic year.

Regular final examinations are held at the close of each semester.

No student will be permitted to take a final examination in a course who has been present at less than seventy per cent of the lectures. To be entitled to attendance credit a student must be present at least one hour in a one and one-half hour lecture, and at least one and one-half hours in a two hour lecture.

Make-up examinations are held in September of each year. (See calendar, p. 4).

Grades

The work of each student shall be graded upon examinations, according to the following scales:

A	Superior	} Honor Grades
B	Above average	
C	Average	
D	Lowest passing grade	
E	Unsatisfactory*	
F	Failure**	
Inc.	Incomplete — no examination	

*An unsatisfactory grade may be made up by taking the make-up examination and obtaining a satisfactory grade.

**A failure may be made up, only by repeating the course in its entirety and obtaining a satisfactory grade.

Honor List

The Honor List, issued at the end of each semester, contains the names of all students taking a full program who have an honor grade average in all subjects with no grade below "C" in any subject.

Scholarships

Partial tuition scholarships are awarded annually to the two highest ranking students of the freshman and middler classes. These awards are made during the summer and are based on the record made during the previous school year.

Freshman Class — One \$80.00 scholarship is awarded to the highest ranking student.

One \$40.00 scholarship is awarded to the second highest ranking student.

Middler Class — Similar awards are made to the two highest ranking students.

In order to be eligible for these awards, students must fulfill the following conditions:

1. They must be carrying a full program — not less than twenty semester hours.
2. They must register for a full program in the fall succeeding the award.

Student Activities

While the major part of the time of evening students must of necessity be taken up with their studies, it is possible for interested students to engage in activities. The administrative officers of the school believe that the association of students in such activities is of distinct value.

TUITION AND FEES

Application Fee

An application fee of \$5.00 is required when the application for admission is filed. This fee is not refundable.

Tuition

Tuition is payable in advance in four installments on the following Mondays: \$40 at the opening of school on September 23, \$40 December 2, \$40 February 17 and \$40 at the beginning of the third term on May 12.

Students will be permitted to pay their tuition installment any time during the week in which it falls due without being charged the late fee.

Students who cannot meet their quarterly tuition bills in full are expected to arrange with the Director for the payment of their quarterly bills before the date on which they are due.

Students who need to do so may make special arrangements for the payment of their tuition monthly or weekly in a personal conference with the Director. For this service a small charge is made.

Students enrolled for less than a full-year program are charged on a semester hour basis of \$8.00 per semester hour.

Late Payment Fee

Students who do not pay their quarterly tuition bills during the week when they are due must pay a late payment fee of \$1.25. This is a fixed fee and does not vary with the amount of the tuition bill.

Examination Fees

A fee of \$2.00 is charged for each make-up examination taken by a student.

Payments

Checks or money orders should be drawn payable to Northeastern University.

Withdrawals and Refunds

In the event a student is obliged to withdraw from the school for causes deemed adequate by the committee on Administration, the unused tuition will be refunded.

DESCRIPTION OF COURSES

*Starred courses in the following list are omitted in 1940-41, but are to be given in subsequent years.

ECONOMICS

Ec 3 Economic Principles

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

2 semester hour credits

Ec 4 Economic Principles

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

2 semester hour credits

Ec 5 Economic Problems

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include consumption, protective tariffs and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

2 semester hour credits

Ec 6 Economic Problems

A continuation of Ec 5. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

2 semester hour credits

Ec 7 Money and Banking*

This course, amplifying the more general treatment of money and credit in Ec 3 and Ec 4, considers the problems of monetary and banking control with particular emphasis upon the policies of the Federal Reserve System. Current developments are carefully considered.

Pre-requisite: Ec 3, Ec 4

2 semester hour credits

Ec 11 Labor Problems*

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. The attitude of our government toward these problems and its attempts to handle them are analyzed carefully. The suggestions of other groups and agencies in respect to these problems will be treated, e.g. co-operative movement, socialism.

Pre-requisite: Ec 3, Ec 4

3 semester hour credits

Ec 15 History of Economic Thought

A critical review of the origin and development of economic thought. After a brief account of the contributions of Plato and Aristotle, the early Christian fathers, and the writers of the Middle Ages, each of the main schools of economic thought is taken up in turn: the Mercantilists, the Physiocrats, the Classical School, the Socialists, the Historical School, the Austrian School, and that of Alfred Marshall.

Pre-requisite: Ec 5, Ec 6

2 semester hour credits

Ec 20 Public Finance

In this course a study is made of the kinds of taxes imposed by municipal, state, and federal governing bodies. Attention is given to the "trend" in taxation. Governmental borrowings and revenues are studied as to their general effect on the finances of individuals and business concerns. A large part of the time allowed for this course is spent in a study of the sources of revenue such as commodity taxes, highway taxes, general property taxes, taxes on business, poll taxes, income taxes, and death taxes.

2 semester hour credits

ENGLISH**E 1-A English I**

The aim of this course is to help the student attain competence in the understanding and evaluating of modern literature and in written expression. It includes a review of the structural essentials of the English language, various written assignments, and the study of essays and informational articles.

3 semester hour credits

E 2-A English I

Continuing the general purposes of E 1-A, this course proceeds to a study of the special problems of description and narration, and to a critical reading of poems, short stories, and plays.

3 semester hour credits

E 7 Advanced Composition*

For students interested in imaginative writing. Original papers by the students will be discussed in class and in weekly conference with the instructor. The principles underlying creative writing will be carefully studied.

2 semester hour credits

E 8 Advanced Composition*

Continued practice in creative writing supplemented by an analysis of the work appearing in the better magazines. The shorter forms will be emphasized.

Pre-requisite: E 7

2 semester hour credits

E 13 Effective Speaking

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction is planned to eliminate defects of voice, posture, and delivery, and to develop in the student an ability to speak easily, naturally, and forcefully.

1 semester hour credit (2 cl.)

E 14 Effective Speaking

Continued practice in impromptu and extempore speaking, organization of material, consideration of the audience, and vocabulary building, form the basis of the course.

Pre-requisite: E 13

1 semester hour credit

E 15 Survey of English Literature

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

3 semester hour credits (4 cl.)

E 16 Survey of English Literature

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

3 semester hour credits (4 cl.)

E 25 American Literature to 1860*

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

2 semester hour credits

E 26 American Literature After 1860*

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

2 semester hour credits

E 33 Modern Literature 1895-1915

Beginning with a study of late nineteenth-century literature in England and America, the course considers the principal literary developments of the period 1895 to 1915. New forms and methods in poetry, the novel, the short story, and the play are studied, and are illustrated by the work of literary groups and movements and by such major writers as Walt Whitman and Henry James.

2 semester hour credits

GOVERNMENT**Gv 1 American Government and Politics**

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative, and judicial machinery under the party system of government and bureaucracy.

2 semester hour credits

Gv 2 American Government and Politics

A more detailed study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative, and judicial functions of government in a democratic country.

2 semester hour credits

Gv 3 Comparative Government*

The older governments of Europe, those, principally of Great Britain and France, but also to Switzerland and the Scandinavian countries, are described and analyzed in this course. Institutions are compared in these various states with reference to America and the newer governments of Europe.

2 semester hour credits

Gv 4 Comparative Government*

A study of the newer governments of Europe, as found in Germany, Italy, and the Soviet Union. Democracy and dictatorship are analyzed as different modes of life and rule. These states are compared to each other, to the older governments of Europe, and to the United States.

2 semester hour credits

HISTORY**H 1 History of Civilization**

This is primarily a background course. Introductory lectures deal with primitive society, the development of language and writing, and the early contributions of Egypt and Asia. More detail is given to the structure of Greek and Roman society, the rise of the Christian Church, the barbarian invasions of the Empire, the growth of Islam, and the life of the early Middle Ages.

4 semester hour credits (4 cl.)

H 2 History of Civilization

This course deals with the growth of the monarchies in Europe, the medieval Church, the art and literature of the Renaissance and Reformation, the economic revolution, the Age of Reason in France and England, the Old Regime and the Revolution in France, and the growth of science and industrialism.

As in H 1, the emphasis is upon the cultural rather than the political history of Europe.

4 semester hour credits (4 cl.)

H 9 The United States to 1865*

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected, though the political history is stressed.

2 semester hour credits

H 10 The United States Since 1865*

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

2 semester hour credits

H 13 English and American Constitutional History*

The first semester of this course is devoted to a consideration of the English constitution and of the common law; local government vs. central government; the origin and growth of Parliament; the development of the British cabinet system; and a comprehensive study of statutes and documents.

3 semester hour credits

H 14 English and American Constitutional History*

In the second term a study is made of the historical development of the United States Constitution with particular emphasis on its progressive adaptation to a changing social and economic order.

3 semester hour credits

PSYCHOLOGY**Ps 1 Introduction to Differential Psychology**

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

2 semester hour credits

Ps 2 General Psychology

An introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

2 semester hour credits

Ps 7 Social Psychology of Everyday Life

A course devoted to the psychological examination of some of the phenomena observable in everyday social life. These include customs, crazes, fashions, rumor, propaganda, crowds, leadership, competition, and co-operation.

Pre-requisite: Ps 1 and 2

2 semester hour credits

Ps 8 Social Psychology, Theory, and Methods

A survey of the field of social psychological theory and an examination of the experimental techniques utilized in this field of psychology. Special emphasis is placed upon attitudes and their measurement.

2 semester hour credits

SOCIOLOGY**S 1 Introduction to Sociology***

In presenting a survey of the origins and sources of human society, this study provides orientation for the courses in principles and problems which follow. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

2 semester hour credits

S 2 Principles of Sociology*

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires only an elementary survey of the subject, as well as the student who plans to take advanced courses in social science.

2 semester hour credits

S 3 Social Problems

Attention is given the nature, complex causation, and interrelatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

2 semester hour credits

S 4 Social Pathology*

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group. Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

2 semester hour credits

S 7 Principles of Social Ethics

To clarify the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments may be compatible with one's best reflective thought.

2 semester hour credits

S 9 Problems in Social Ethics*

Problems arising from differences in moral standards found in the various social groups will be examined. The question of ethical relativism and determinism will be considered. A selected number of specific problems in social ethics will be discussed.

2 semester hour credits

S 11 Social Control*

The methods by which social forces are controlled provide the fundamental material of the course. External and internal types of control of the social organism are discussed. The use of violence, the power of public opinion, and the application of certain principles of social psychology are examined.

2 semester hour credits

S 14 Urban Sociology*

Upon studying the complex human society found in the various cities of the world, this course then turns to an analysis of the modern American city. Its types, social values, and pathological elements are discussed. Methods of city planning are considered. The belief on the part of some sociologists that democracy is doomed by its cities is examined in the light of typical problems of urban society.

2 semester hour credits

*Starred courses are omitted in 1940-41, but are to be given in subsequent years.

Student List

BALDWIN, CHARLES W.	Hyde Park	MAHER, THOMAS F.	Waltham
BARKSDALE, PHILIP B.	Winchester	MARGOLIN, JOSEPH N.	Dorchester
BEATTY, EDWARD F.	Mansfield	MASIELLO, MICHAEL	Lynn
BELOVITCH, CHARLES	Worcester	MASSIRMAN, ARNOLD	Chelsea
BLACKMAN, JORDAN S.	Boston	MAVROS, CHRISTY L.	Lynn
BLAKE, SAMUEL	Roxbury	McKENNA, JOHN J., JR.	Danvers
BLYER, BENJAMIN	Chelsea	MEDNICOFF, MELVIN	Haverhill
BOYD, ROBERT B.	Dorchester	MELEMED, IRVING L.	Chelsea
BROITMAN, ALBERT S.	Dorchester	MILLEN, SYDNEY G.	Boston
BROWN, HARRY	East Boston	MINSKY, MARTIN M.	Winthrop
CARGILL, THOMAS E., JR.	Melrose	MOGUE, ELEANOR F.	Braintree
CARGILL, WILLIAM R.	Melrose	MORTON, HENRY I.	Needham
CECCARELLI, RENATO	Center Rutland, Vt.	<i>B.Ch.E. Northeastern University</i>	
CHEYNE, ROBERT B.	Wakefield	MULLEN, PAUL R.	Wrentham
COLOTTI, CARMINE J.	East Boston	MUNSON, ROBERT E., JR.	Greenwood
COOPERMAN, IRVING	Everett	MURRAY, EDWARD F.	Malden
COSTELLO, JOHN F.	Chelsea	NICCOLLS, FRANCIS A., JR.	Brookline
COTTI, LOUIS J.	Plymouth	NYBERG, STEN G.	Holliston
CROLL, IRVING I.	Chelsea	PARLOW, EDITH	Chelsea
CUCINOTTA, JOHN V.	Belmont	PAUL, ANTHONY A.	Boston
DAVIS, WALTER B.	Melrose	PINGREE, CHARLES V.	Lynn
DAVISON, SHERMAN	Arlington	POLANSKY, ROSE	Roxbury
DAY, CHARLES E.	Beverly	RABINOVITZ, FRED	Boston
DESMOND, ROBERT J.	Boston	RICHARDSON, DOROTHY E.	Dedham
EGAN, WALTER B.	South Boston	RING, JOSEPH T.	Brookline
ENNIS, CHARLES S.	West Roxbury	ROBB, ROMOLA	Boston
FABIANO, SALVATORE A.	Boston	ROBINSON, JAMES O.	North Chelmsford
FARACI, PETER J.	Boston	ROSEN, HERBERT	Roxbury
FOSTER, MARJORIE E.	Boston	RYAN, JOHN J., JR.	Woburn
FRANKLIN, JESSE W.	Webster Springs, W. Va.	SAWABINI, CHARLES E.	Brookline
FRITZ, HYMAN	Roxbury	SELVITELLA, JAMES R.	Medford
GEREMONTE, FRANK M.	Stoneham	SERRECCHIA, PRINCIPE E.	Roxbury
GOLDMAN, ALBERT A.	Dorchester	SHEINGOLD, LEONARD S.	Roxbury
GORDON, SAMUEL L.	Brighton	SHUSTER, FRANCIS B., JR.	West Newton
GRAY, SAMUEL L.	Roxbury	SILVERMAN, SAMUEL	Brookline
HANSON, ANDREW T.	Watertown	SINATRA, EDWARD J.	Brighton
<i>B.E.E. Northeastern University</i>		SMITH, RAYMOND P.	Sturbridge
HELIN, RAUNI V.	Amesbury	STONE, CARRIE N.	Roslindale
HUROWITZ, PAUL	Lynn	SUSHMAN, DAVID	Boston
IPPOLITO, VINCENT O.	Medford	SWARTZ, JOSEPH	Medford
JAKUBENS, JOHN H.	Scituate	SYBICKI, ANTHONY P.	Chelsea
JOHNSON, PAUL M.	Gorham, Me.	THAMES, LUCILLE D.	Boston
KAITZ, PEARL G.	Chelsea	THOMPSON, PHYLLIS E.	Medford
KALIKOW, MARTIN	Lynn	THROCKMORTON, RALPH E.	North Haven, Conn.
KEHOE, PHILIP J.	Dorchester	TULLY, JAMES J. JR.	Chelsea
KELLY, LEO J.	Roxbury	VERRILL, RALPH F.	Concord
KILROY, STEPHEN P.	Dorchester	VOKE, EDWARD R.	Chelsea
KOFFMAN, LEONARD S.	Roxbury	WAUGH, THOMAS H.	Revere
KOOCHER, DAVID	Dorchester	WEINBERG, ARTHUR	Chelsea
LANDRY, ALBERT J.	Athol	WELSH, WILLIAM T.	Boston
LAZAZZERO, ARTHUR J.	Waltham	WEST, PAUL J.	Boston
LEE, WALTER H.	Brookline	WILLIAMS, MARGARET M.	Dorchester
<i>B.C.E. Northeastern University</i>		WOODHULL, DEAN H.	Wakefield
LESSA, CHARLES R.	East Boston	WYNER, HENRY I.	Brighton
LEVITT, SIGFRIED	Mattapan	<i>B.C.E. Northeastern University</i>	
MACAULAY, JAMES E.	Malden	ZOLLA, FRANK E.	Revere
<i>B.C.E. Northeastern University</i>			

NORTHEASTERN UNIVERSITY

College of Liberal Arts

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Students may concentrate in any of the following fields: Biology, Chemistry, Economics-Sociology, English (including an option in Journalism), and Mathematics-Physics. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

College of Engineering

Offers curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

College of Business Administration

Offers six curricula: Accounting, Banking and Finance, Marketing and Advertising, Industrial Administration, Journalism, and Public Administration. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

School of Law

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

School of Business

Offers curricula through evening classes in Accounting, Management — with Industrial and Merchandising majors, Law and Business Management, and Engineering and Business leading to the degree of Bachelor of Business Administration in specified fields or the Bachelor of Commercial Science in Law and Business Management. Preparation for C.P.A. Examinations. Shorter programs may be arranged. Co-educational.

Evening Courses of the College of Liberal Arts

Certain courses of the College of Liberal Arts in the field of English, Literature and the Social Sciences are offered during evening hours. These courses constitute a three-year program equivalent in hours to one-half the requirement for the A.B. or S.B. degree and provide general education and preparation for admission to the School of Law. Associate in Arts title conferred. Co-educational.

The College of Liberal Arts, Engineering, and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

In addition to the above schools the University has affiliated with it and conducts: the Lincoln Technical Institute offering, through evening classes, courses of college grade in various fields of engineering leading to the title of Associate in Engineering; and the Lincoln Preparatory School, an accredited evening school preparing for college entrance and offering other standard high school programs.

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

All schools except	BOSTON, MASS.	School of Law
School of Law	Telephone KENmore 5800	47 Mt. Vernon Street
360 Huntington Avenue	Connecting all schools	Near State House



Lincoln Technical Institute

College Courses in Engineering

1940



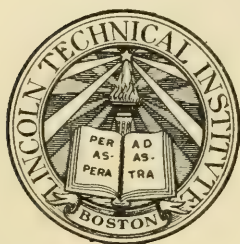
1941

EVENING SESSIONS

LINCOLN TECHNICAL INSTITUTE

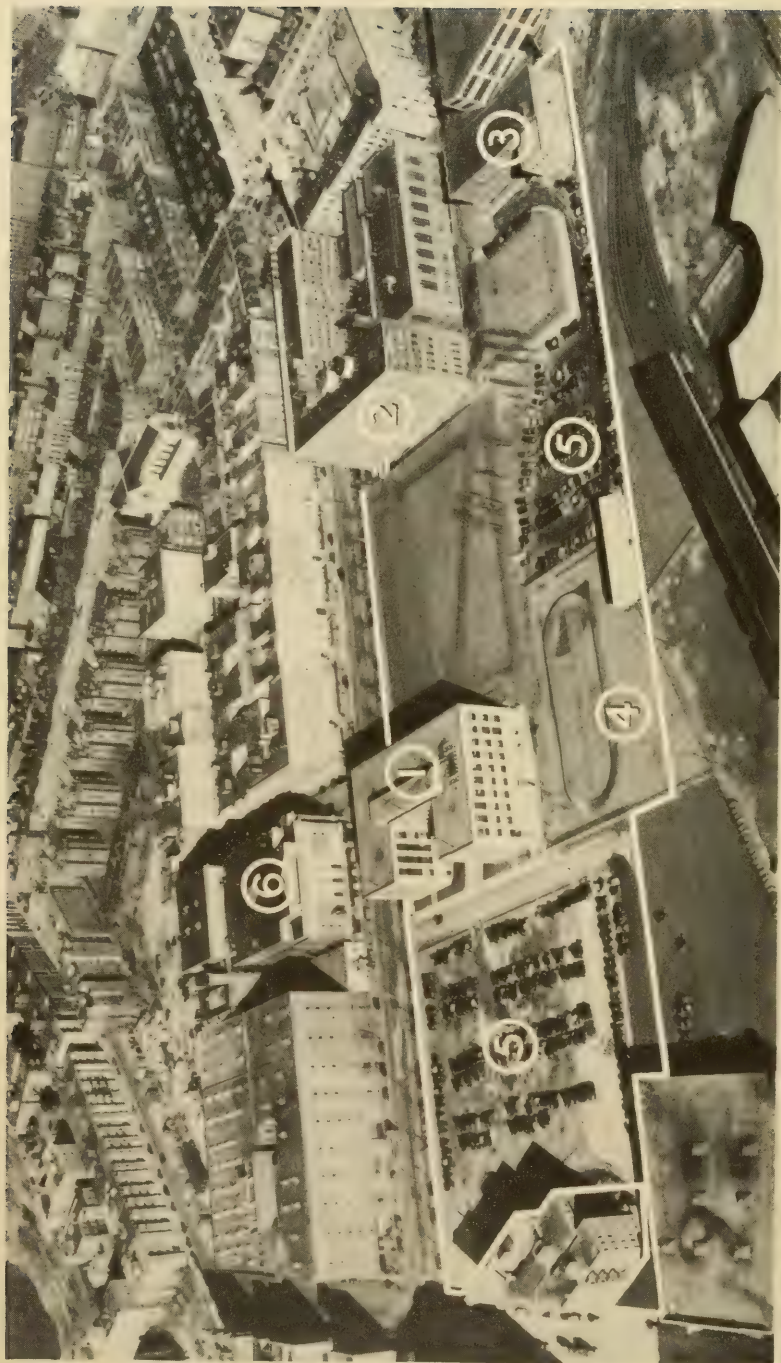
(Affiliated with Northeastern University)

Evening Engineering Courses of College Grade



1940-1941

The Lincoln Technical Institute offers courses in Engineering leading to the Title of Associate in Engineering and in conjunction with Northeastern University School of Business, offers courses carrying credit toward the Degree of Bachelor of Business Administration in Engineering and Management awarded by Northeastern University.



NORTHEASTERN UNIVERSITY, HUNTINGTON AVENUE SITE

WHERE LINCOLN TECHNICAL INSTITUTE CLASSES ARE HELD

- | | | |
|------------------|-----------------------------|-----------------------|
| 1. West Building | 3. South Building | 4. Outdoor Gymnasium |
| 2. East Building | 5. University Parking Areas | 6. Boston Opera House |

Lincoln Technical Institute

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Assistant to the Vice-President

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Assistant to the Dean

CALENDAR

	1940	
Registration Period	SEPTEMBER	3-14
Advanced Standing and Condition Examinations	SEPTEMBER	6
Classes Begin	SEPTEMBER	16
Legal Holiday. No Classes	NOVEMBER	11
Thanksgiving Recess. No Classes	NOVEMBER	27-28
Final Class Session before Christmas Recess	DECEMBER	20
	1941	
First Class Session after Christmas Recess	JANUARY	6
Division B Classes Begin	JANUARY	13
Legal Holiday. No Classes	MAY	30
Commencement	JUNE	16

OFFICE HOURS

AUGUST 12, 1940 — JUNE 14, 1941

Week days, except Saturday	9 a.m. till 9 p.m.
Saturday	9 a.m. till 1 p.m.

JUNE 16, 1941 — AUGUST 16, 1941

Monday, Wednesday, and Thursday	9 a.m. till 4 p.m.
Tuesday and Friday	{ 9 a.m. till 4 p.m.
	{ 6 p.m. till 8 p.m.
Saturday	9 a.m. till 12 m.

INTERVIEWS

Prospective students, or those desiring advice or guidance with regard to any part of the school work or curricula, are offered personal interviews with the Dean or his assistants. No enquirer should hesitate to ask for an appointment as, in the long run, time is saved during the school year by having the whole educational problem discussed before the opening of the school.

Faculty

FREDERIC S. BACON, JR.

Appointed 1936

B.S. Northeastern University, 1936; Laboratory Assistant, Northeastern University, 1935-36; Radio Tube Engineer, Hytron Corporation, Salem, 1936-37; Graduate Student Course Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., 1937-38; Sales Engineer, Central Station Division, Westinghouse Electric and Manufacturing Company, Boston, 1938—.

Electricity II, III

WAYLAND S. BAILEY

Appointed 1939

S.B. Massachusetts Institute of Technology, 1919; M.S. Lehigh University, 1928; Member of American Society of Mechanical Engineers; Assistant Instructor, Massachusetts Institute of Technology, 1923-25; Instructor, Lehigh University, 1925-29; Assistant Professor, University of Maryland, 1929-37; Assistant Professor, University of Connecticut, 1937-38; Assistant Professor, Northeastern University, 1939—.

Applied Mechanics

CHARLES O. BAIRD, JR.

Appointed 1936

B.S. Northeastern University, 1934; Instructor, Northeastern Polytechnic School, 1922-31; Member of Boston Society of Civil Engineers; Member of New England Water Works Association; Member of New England Sewage Works Association; Assistant Professor of Civil Engineering, Northeastern University, 1922—.

Surveying

WALTER ALFRED BALDWIN

Appointed 1931

A.B. Ohio Wesleyan University, 1906; Graduate Study, University of Chicago and Harvard University; Head, Department of Mathematics, Chillicothe High School, Ohio, 1906-8; Head, Department of Mathematics, Mansfield High School, Ohio, 1908-10; Head, Science Department, Huntington School for Boys, Boston, 1912-14; Instructor in Physics and Chemistry, Lincoln Preparatory School, 1910—. Investigator and Consultant.

Chemistry

HENRY BRASK

Appointed 1928

B.C.E. Northeastern University, 1923; Member of The Boston Society of Civil Engineers; Aspinwall & Lincoln, Civil Engineers, 1920-1922; Boston & Albany R.R., 1922-1923; Engineer, Burtis Brown, Engineers, 1923-1934; Engineer, George P. Carver Engineering Co., 1934—.

Structural Drawing and Design

CURTIS C. BROOKS

Appointed 1937

B.M.E. Northeastern University, 1924; A.M. Boston University, 1939; Instructor, Chester High School, Vermont, 1925-26; Instructor, Wayland High School, New York, 1926-27; Instructor, Hanover High School, 1927-29; Instructor, Framingham High School, 1929—.

Engineering Mathematics

RICHARD U. BRYANT

Appointed 1939

S.B. Massachusetts Institute of Technology, 1936; Firestone Tire and Rubber Company, 1936-38; Instructor in Mechanical Engineering Department, Massachusetts Institute of Technology, 1938—.

Air Conditioning Design

LAURENCE FULLER CLEVELAND

Appointed 1931

B.S. Worcester Polytechnic Institute, 1929; M.S. Massachusetts Institute of Technology, 1935; Member of the Society for the Promotion of Engineering Education; Member of the American Institute of Electrical Engineers; Member of the New England Society of Mechanical Drawing Teachers; Assistant Professor of Electrical Engineering, Northeastern University, 1929—.

Engineering Drawing

OTIS F. CUSHMAN

Appointed 1937

B.S. University of New Hampshire, 1932; M.S. University of New Hampshire, 1934; Research Assistant, University of New Hampshire, 1935–36; Instructor in Drawing, Northeastern University, 1936—.

Engineering Drawing

ALEXANDER BARRETT DAYTZ

Appointed 1931

B. S. Massachusetts Institute of Technology, 1928; Phoenix Bridge Co., 1928–1929; Bridge Designer, Boston and Maine Railroad Company, 1929–30; Assistant Structural Engineer, Boston Transit Department, 1930–32; Assistant at Massachusetts Institute of Technology, 1932; Massachusetts Metropolitan District Water Supply Commission, 1933–35; Engineer for Metropolitan Sewerage Division, 1936; Practicing Engineer, 1936—.

Structures, Concrete, Concrete Design

JOHN JAMES DEVINE

Appointed 1939

B. S. Rhode Island State College, 1927; Sc.M. Brown University, 1936; Engineer, New York Telephone Company, 1927–32; Assistant Engineering Instructor, Rhode Island State College, 1934–37; Instructor in Civil Engineering, Northeastern University, 1937—.

Engineering Drawing

ELMER HASKELL EVERETT

Appointed 1935

B.S. Northeastern University, 1934; Graduate Study, Massachusetts Institute of Technology, 1935; M.S. Harvard, 1936; Refrigeration Engineer, Boston Ice Company, 1933–35; Compressor Department, Ingersoll-Rand Company, 1936; Turbine Department, General Electric Company, 1936; Assistant to Research Engineer, Birdseye Laboratories, 1937—.

Mechanism — Machine Drawing

LAURENCE D. FRIZZELL

Appointed 1939

B.S. Bowdoin College, 1925; A.M. Harvard University, 1931; Ph.D. Harvard University, 1933; Teacher of Mathematics, Dartmouth High School, South Dartmouth, Massachusetts, 1925–26; Private Assistant, Harvard University, 1934–35; Research Chemist, Norton Company, 1936–37; Private Assistant, Harvard University, 1938—.

Analytical Chemistry

WALTER S. FROST

Appointed 1937

B.S. Tufts College, 1912; Ph.D. Cornell University, 1923; Instructor, Cornell University, 1916–1919; Instructor, West Virginia University, 1920; Assistant Professor, University of New Hampshire, 1920–26; Chemist, Burnham Soluble Iodine Company, 1929—.

Industrial Chemistry Organic Chemistry

ROYAL MERRILL FRYE

Appointed 1930

A.B. Boston University, 1911; A.M. Boston University, 1912; Ph.D. Boston University, 1934; Instructor in Boston University, 1913-16; Instructor in Department of Physics, Massachusetts Institute of Technology, 1916-31; Instructor in Physics, Worcester Polytechnic Institute, 1926-27; Assistant Professor of Physics, Boston University Graduate School, 1931—.

Practical Physics, Advanced Mathematics

MARIO GIELLA

Appointed 1938

B.S. Northeastern University, 1937; M.A. Boston University, 1939; Assistant in Chemistry, Northeastern University, 1938—.

Analytical Chemistry Laboratory

ELMER E. HASKINS

Appointed 1939

B.M.E. Northeastern University, 1925; M.A. University of Pittsburgh, 1930; Ph.D. Boston University, 1938; Instructor, Monongahela High School, Pennsylvania, 1925-30; Assistant Professor of Mathematics, Northeastern University, 1930—.

Engineering Mathematics

ROBERT EDGAR HODGDON

Appointed 1927

B.S. University of New Hampshire; M.S. Massachusetts Institute of Technology; Teacher in Mechanical Arts Department, Dover High School, New Hampshire, 1919-20; Teacher of Physics and Mathematics, Concord High School, New Hampshire, 1920-21; Training Assistant United States Veterans Bureau, 1921-22; Instructor in Physics Department of Massachusetts Institute of Technology, 1922-33; Rindge Technical School, 1933—.

Engineering Drawing, Practical Physics, Advanced Mathematics, Electricity

C. DAVID JOHNSON

Appointed 1938

A.B. Clark University, 1915; M.A. Boston University, 1935; Instructor in Physical Training, Clark College, 1912-16; Instructor in Physics, Clark University, 1915-19; Instructor in Physics, Worcester Polytechnic Institute, 1919-20; Instructor in Physics and Acting Head of Department, Simmons College, 1920-21; Instructor in Physics, Tufts College, 1922-29; Assistant Professor of Physics, Northeastern University, 1929—.

Physics

ISRAEL KATZ

Appointed 1939

Northeastern University; J. W. Moore Machinery Corporation, 1936; Somerville Machine and Foundry Company, 1937; Sanborn Company, 1938; Laboratory Assistant in Mechanical Engineering, Northeastern University, 1938—.

Engineering Laboratory

LEON KEACH

Appointed 1938

S.B. Massachusetts Institute of Technology, 1917; M.I.T. Traveling Fellow in Architecture, 1920-22; Office of Henry and Richmond.

Architectural Drawing and Design

HERBERT G. LANG

Appointed 1936

B.S. Northeastern University, 1934; Draftsman, Mason-Neilan Regulator Company, 1934—.

Engineering Drawing

JOHN ROBERT LEIGHTON

Appointed 1915

B.C.E. Northeastern University, 1914; Instructor, Northeastern University, 1914-17; Instructor, Northeastern Polytechnic School, 1915-27; Instructor, Lincoln Technical Institute, 1927—.

Applied Mechanics, Strength of Materials

ROBERT E. MADSEN

Appointed 1933

B.M.E. Northeastern University, 1931; B.S. Northeastern University, 1933; Graduate Study, Boston University; Member of Massachusetts Schoolmasters Club; Member of Association of Teachers of Mathematics in New England; Member of Mechanical Drawing Association of New England; Instructor, Northeastern University, 1931-34; Instructor, Pond Street High School, Ayer, 1934-35; Maynard High School, 1935-36; Bedford Junior High School, 1936—.

Engineering Mathematics Engineering Drawing

WALDEMAR STANWOOD MCGUIRE

Appointed 1936

S.B. Massachusetts Institute of Technology, 1928; M.A. Boston University, 1930; Instructor at Tufts College, 1920-21; Instructor Rhode Island State College, 1921-24; Northeastern University, Professor of Chemistry, 1924—.

Analytical Chemistry

JAMES HENRY NYE

Appointed 1939

B.S. Northeastern University, 1940; Student Assistant in Electrical Laboratory, Northeastern University, 1938—.

Electrical Laboratory

GEORGE EVERETT PIHL

Appointed 1938

B.S. Northeastern University, 1937; M.S. Harvard Graduate School of Engineering, 1939; Instructor in Electrical Engineering, Northeastern University, 1938—.

Electrical Laboratory

CHARLES LAMBERT RICHARDSON

Appointed 1939

B.S. Massachusetts Institute of Technology, 1930; Goodyear Zeppelin Corporation, 1930-33; Wiley & Foss, 1933-35; Instructor, Boston University, 1936; Instructor, New England Aircraft School, 1937—.

Airplane Design

ALBERT E. SANDERSON, JR.

Appointed 1936

B.C.E. Northeastern University, 1926; Bethlehem Steel Company, 1927-30; Boston Bridge Works, 1930-34; Instructor in Drawing, Northeastern University, 1938—.

Engineering Drawing Physics

JOHN DAVID SHORE

Appointed 1926

Lieut. U. S. N. R.; S.B. Massachusetts Institute of Technology, 1912; Architectural Draftsman, 1916-21; Instructor, Franklin Union, Boston, 1921-24; Head of Department of Mechanical Drawing, United States Vocational School, Portland, Maine, 1924-25; Instructor in Mathematics, English High School, 1925—; University Extension Work: Industrial Mathematics and Blue Print Reading, Navy Yard, Boston, and Industrial Mathematics and Slide Rule, Massachusetts Institute of Technology, Cambridge, 1937-1938.

Engineering Mathematics

FREDERICK ARLINGTON STEARNS

Appointed 1921

B.S. 1917, M.S. 1934, Massachusetts Institute of Technology; Member of American Society of Mechanical Engineers; Member of Society for Promotion of Engineering Education; United States Army, 1917-19; Instructor, Massachusetts Institute of Technology, 1920; Professor in the Department of Mechanical Engineering, Northeastern University, 1920—.

Heat Engineering

EDWARD B. VAN DUSEN

Appointed 1940

B.S. Northeastern University, 1934; Ed.M. Boston University, 1936; Graduate Study, Boston University; Assistant Instructor in Physics, Northeastern University, 1934-36; Instructor in Shop and Mechanical Drawing, Holliston High School, 1936-37; Instructor in Mathematics and Science, Sudbury High School, 1937-38; Instructor in General Science, South Junior High School, Quincy, 1938—.

Engineering Mathematics

ALBERT E. WHITTAKER

Appointed 1936

B.M.E. Northeastern University, 1924; Ed.M. Harvard University, 1932; B.S. Northeastern University, 1933; Graduate Study, Boston University, 1934—; Assistant Professor of Mechanical Engineering, Northeastern University, 1924—.

Engineering Mathematics

CHESTER HENRY WOLOWICZ

Appointed 1938

B.S. Northeastern University, 1937; Western Electric Company, 1937-38; Jamison Cold Storage Door Company, 1938; Instructor, Mechanical Engineering, Northeastern University, 1938—.

Machine Design Engineering Laboratory

GEORGE B. WOOD, JR.

Appointed 1939

S.B. Massachusetts Institute of Technology, 1938; Research Assistant in the Automotive Laboratory Division of Industrial Cooperation, Massachusetts Institute of Technology, 1938—.

Airplane Engine Design

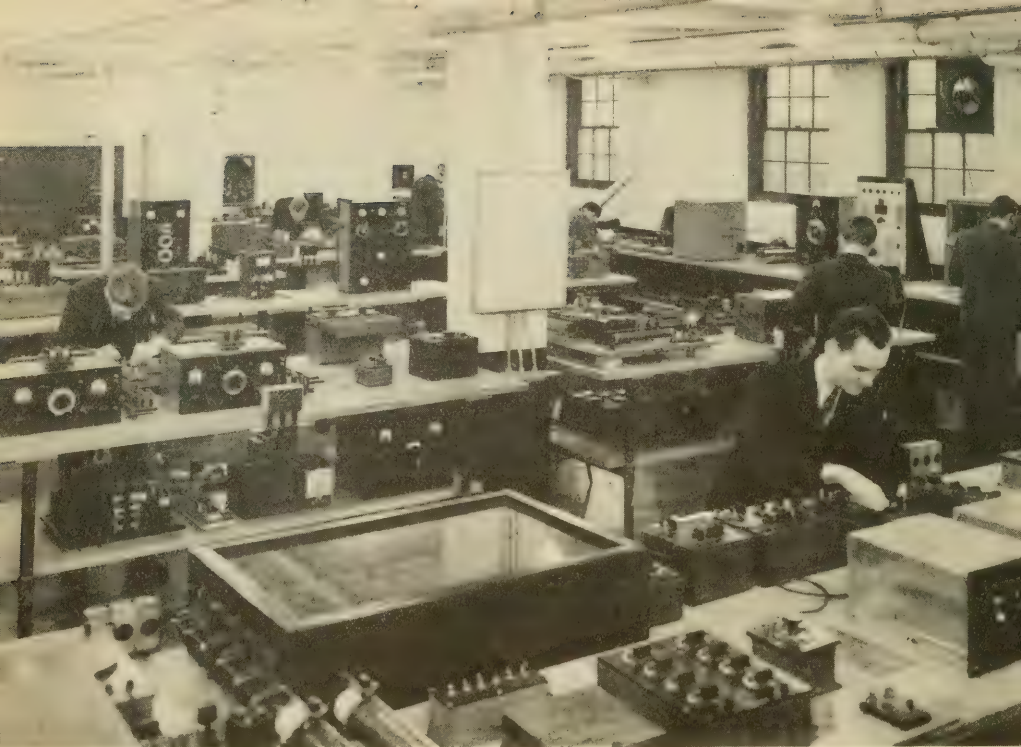
SAVERIO ZUFFANTI

Appointed 1934

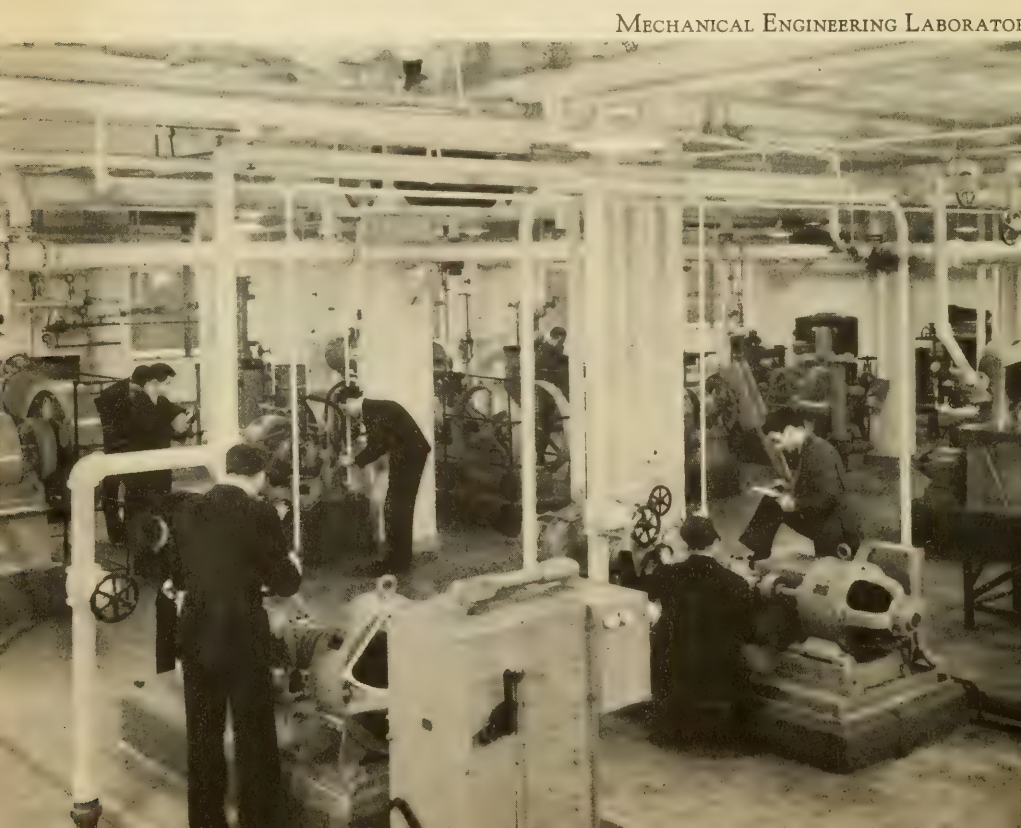
B.Ch.E. Northeastern University, 1930; M.A. Boston University, 1932; B.S. Northeastern University, 1934; Assistant Professor of Chemistry, Northeastern University, 1930—.

Analytical Chemistry

EDNA M. EDISON, *Secretary*
HELEN E. HILDRETH, *Bookkeeper*
HAWTHORNE P. SUMMERS, *Recorder*



ELECTRICAL MEASUREMENTS LABORATORY



MECHANICAL ENGINEERING LABORATORY

The Lincoln Schools

THE Lincoln Schools, conducted by and affiliated with Northeastern University, include the Lincoln Technical Institute and the Lincoln Preparatory School. These schools offer the non-degree-granting work conducted by Northeastern University. In the Lincoln Technical Institute the work, however, carries credit towards the Title of Associate in Engineering and is acceptable also towards the degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

All classes in the Lincoln Schools are held in the evening and are especially designed to meet the needs of those who are employed during the day.

The first of the Lincoln Schools to be established was the Lincoln Preparatory School, known for many years as the Northeastern Preparatory School. This school had its real beginning in 1897 in the single courses offered in History, Science, and other subjects of a cultural nature, and in certain trade courses intended to benefit men engaged in various occupations.

Gradually the trade courses were discontinued and the remaining subjects were welded into a regular high school program, upon the completion of which a standard high school diploma was awarded.

The primary purpose of the school has been effective preparation of students for college entrance. For this reason constant attention has been paid through the years to the maintenance and improvement of standards.

In 1925 women were admitted to classes on the same basis as men. Since 1924 the school has been accredited by the New England College Entrance Certificate Board, a marked distinction in the case of an evening school, and an expression of confidence that day school standards are maintained. The school today offers curricula in the general, scientific, and classical fields. The enrollment has increased from fewer than fifty students to almost five hundred, of whom one-fifth are women. The faculty has been increased until it now numbers from twenty-five to thirty men of wide experience and training, drawn from the leading day preparatory and high schools of Metropolitan Boston.

Next in point of view of time was the Lincoln Technical Institute, which had its origin in the Evening Polytechnic School. The latter received its title in 1901, when the work of various technical departments, such as the Department of Steam Engineering, the

Department of Art, the Automotive School and the Department of Naval Architecture, were grouped together into curricula. By 1904 we find the school offering definite curricula, generally of three years' duration, in Architecture, Chemistry, Marine Engineering, Structural Engineering, Steam Engineering, along with courses in Art, Navigation, Surveying, Seamanship, and other related fields. In 1925 the title Lincoln Institute was given to the Northeastern Evening Polytechnic School. At this time the Lincoln Institute remodelled, lengthened, and consequently improved the former courses, offering four year curricula in Architecture, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering and Structural Engineering.

Since then, additional curricula have been added, namely, Aeronautical Engineering, and Air Conditioning Engineering.

In addition, provision was made so that students need not pursue a complete curriculum but could elect individual courses related to their present occupations, the only prerequisite of entry being ability to pursue the course with profit to themselves. At the present time there are more than five hundred students receiving instruction in the Lincoln Technical Institute in the various branches of engineering.

Since 1936 the curricular courses of the Institute have been credited by Northeastern University School of Business towards the Degree of Bachelor of Business Administration in Engineering and Management offered by that school.

Effective 1939 the Executive Council of Northeastern University authorized the Lincoln Technical Institute to award the Title of Associate in Engineering to those who satisfactorily complete any one of the prescribed curricula.

The Officers of Administration are constantly alert to changing conditions and from time to time will modify existing courses to meet new needs and develop new courses so that real educational opportunities will be available to employed men and women at convenient evening hours. In particular they are sincerely interested in the problems of each student and are available for vocational and educational guidance. Through the Lincoln Schools many men and women have been able to solve their problems and to secure that education which has enabled them to succeed in the work for which they are adapted by ability and interest. Without the facilities of the Lincoln Schools many of these alumni would still be occupying minor positions with little opportunity for advancement on account of lack of training.

The Lincoln Technical Institute

Engineering Training in the Lincoln Technical Institute

THE LINCOLN TECHNICAL INSTITUTE is an evening engineering school in Boston, offering to the residents of Metropolitan Boston the opportunity for evening engineering studies and meeting the rigid requirements expected of a good school of engineering.

The Lincoln Technical Institute, while not claiming to offer a training equivalent to that offered by a day school of engineering or professing to turn out finished engineers, nevertheless offers an engineering training which is of marked value and which has the following outstanding features:

1. It aims to supply an increasing number of men who have been thoroughly trained in the fundamental theories of mathematics and the physical sciences, who can apply their knowledge to the independent solution of practical problems and to their everyday work, making intelligent use of their textbooks, manuals, and available literature.
2. The courses are conducted by experienced instructors, all of whom have had practical contact with the engineering profession.
3. Considerable stress is laid on the practical aspects of each course, and, where possible, practice is combined with theory. This procedure is simplified because of the practical training and experience of most of our faculty members.
4. All courses meet at convenient evening hours, usually three evenings a week for a full program, so that students may pursue this training without leaving their present occupations and yet have adequate time for outside study.
5. The fees charged are extremely moderate, and, being payable in installments, are within the reach of most ambitious men.
6. The student body is a well-prepared, experienced, and mature group of men of widely varying ages and occupations.
7. *Satisfactory completion of any of the prescribed programs leads to the award of the Title of Associate in Engineering.*
8. *Degree credit is given in the Northeastern University Evening School of Business for work completed in the Lincoln Technical Institute.*

The recent depression has shown that the greatest single need that most of us have is security of employment. Without this security, satisfactory living is difficult, if not impossible. We have learned, furthermore, that this security may best be obtained by providing ourselves with such adequate training that we not only continue to be of service to our employer but that if possible we continue to make ourselves of increasing value. It is to be further secured by qualifying for some other occupation than the one in which we are at present employed. Those who suffered most in the recent depression were those whose specialization was so narrow that they could not adapt themselves to other related phases of their occupation, or those whose education was so general that it lacked depth. A sound engineering course such as that offered by the Lincoln Technical Institute in the evening will furnish a man with an opportunity, not only to obtain the specialization he needs, but furnishes him with a general training in engineering so that in the event of loss of employment through some economic catastrophe he may make a vocational readjustment with a minimum of lost motion.

Opportunities for the Technically-Trained Man

Since Engineering embraces almost the whole range of human activities, the ultimate position of the man who trains himself to enter the engineering field will depend in large measures on the opportunities in his particular field of study and on his own ability and training. However, the range of work within any given engineering field is so great that the average student, applying himself diligently to his chosen program of study, should find first, employment; second, an opportunity to advance in keeping with his ability and training. Below are listed some of the more specific jobs in the various fields of Engineering. These give the various areas in which a man may work and the promotional steps he may take.

The Construction Field: This field embraces *Architecture*, *Civil Engineering* and *Structural Engineering*. The following are some of the positions in this field: construction supervisor, job superintendent, draftsman, estimator, designer, surveyor, general superintendent, contractor, field engineer, etc.

The Electrical Field: The following are some of the positions in this field: operator, maintenance man, installator and service man, tester, inspector, draftsman and designer, research worker,

plant engineer, lighting engineer, estimator, production man.

The Chemical Field: Listed below are some of the positions available in the Chemical field: laboratory assistant, technician, assistant chemist, chemist, production assistant, department supervisor, laboratory supervisor, research worker.

The Mechanical Field: This field embraces also the areas of *Air Conditioning Engineering*, *Diesel Engineering* and *Aeronautical Engineering*. Some of the positions in this field are: draftsman, tool designer, checker, inspector, chief of maintenance, production engineer, machine designer, power plant test engineer, supervisor, experimental department worker.

The Field of Management: These technical areas have, of course, many related positions which are necessary to permit the smooth functioning of any business enterprise, large or small, and frequently many of the higher salaries in the engineering field are paid to men who are in what is generally referred to as the business side of engineering. The following are some of the positions available here: bookkeeper, office manager, accountant, specifications writer, purchasing agent, salesman, public relations agent, employment manager, plant manager, etc.

Industry Demands Trained Men

The remarkable engineering developments of recent years, while conferring many benefits on the human race, have created personnel problems in industry that have demanded the attention of the best brains in the country. The decline of the apprenticeship system and the increased use of machines for processes formerly performed by hand have brought about a system so complicated that a young man entering industry cannot hope to achieve success without some form of specialized training. Even the man already employed in industry in an unskilled or semi-skilled capacity must seriously consider such training if he hopes for advancement.

Opportunities for the Engineer in Metropolitan Boston

The following brief statements regarding Metropolitan Boston and its industries and activities show at a glance the opportunities available to the engineer, and demonstrate that with the continued growth of this area in population, importance, and activity, a large force of men, well trained in engineering experience, are needed for the maintenance and for the development of new and greater projects:

Boston is the business, industrial, and population center of New England; and New England is one of the richest industrial regions in the world.

It has an area of 457 square miles, and a population of 2,000,000, increasing at the rate of approximately 27,000 a year.

The steam and electrical mileage of Metropolitan Boston is greater than that of any similar area in the Western hemisphere.

Boston has over 52,000 manufacturing plants, with more than a billion dollars invested in these manufacturing establishments.

It has more than 25,000 well-ordered mercantile establishments.

It is the shoe and leather center of the world.

It is the center of the country's paper trade.

It is the greatest wool center in the world.

It is the most important cotton-manufacturing district in the Western hemisphere.

It is one of the three great rubber manufacturing centers of the United States.

High quality electrical apparatus is Boston's third greatest industrial output.

It is a great seaport, and has the most advantageously located airport in the United States.

It has a central planning agency, the division of Metropolitan planning, which deals with all highway, rail, and transportation problems for 43 cities and towns.

Faculty

In an evening school it is particularly essential that none but men of wide experience and high ideals be appointed to the faculty. Accordingly, the faculty of the Lincoln Technical Institute has been very carefully chosen, all its members being graduates of leading colleges and universities. They are men of culture and high ideals who are in sympathy with evening school students and understand their aims. They have had excellent training and wide experience in the subjects which they teach. Most of them have served with the institution for many years, and take a personal interest in its aims and its success. The average length of the service of faculty members is more than nine years. The average length of their teaching experience is eleven years. All of them are at present employed as instructors in colleges and universities in the vicinity of Boston, or are men prominent in executive positions in the industrial and commercial world or in the professional practice of engineering.

Student Body

The students of the Lincoln Technical Institute are men of earnest purpose and firm endeavor who bring to bear on their work a thoroughness which promises future success. Their ages last year ranged from 16 to 48, indicating that at almost all ages educational opportunities may be used for material advantage and to increase personal satisfaction in daily labor. Almost all the students are engaged in work during the day and many different occupations have their representatives in the student body, a fact which demonstrates that the school can be of service to men in many walks of life. A list of the various occupations of some of the students attending last year is given below and will prove interesting.

Occupational Survey

The following are some of the occupations represented in the student body during the school year 1939-40:

Agents	Gardeners	Playground Directors
Air Conditioners	General Workers	Plumbers
Apprentices	Glass Grinders	Personnel Managers
Assemblers	Helpers	Policemen
Assistant Managers	Inspectors	Porters
Assistant Teachers	Insurance Men	Poultrymen
Bakers	Ironworkers	Printers
Blue Print Readers	Interior Decorators	Purchasing Agents
Budget Managers	Investment Brokers	Receivers
Butchers	Laborers	Research Assistants
Cabinet Makers	Laboratory Assistants	Restaurant Workers
Chauffeurs	Laboratory Technicians	Salesmen
Chemist Assistants	Layout Men	Service Boys
Chemists	Leather Workers	Shipbuilders
Cleaners	Linemen	Shipfitters
Clerks	Managers	Shippers
Contractors	Manufacturers	Shoe Workers
Cooks	Markers	Shophands
Coopers	Mason helpers	Students
Cost Estimators	Machinists	Sub-Foremen
Countermen	Mail Clerks	Superintendents
Credit Men	Meat Packers	Surveyors
Cutters	Mechanics	Tanners
Diemakers	Metal Workers	Ticket Takers
Domestics	Meteorologists	Tile Setters
Draftsmen	Meter Readers	Tool Designers
Drivers	Milkmen	Tree Surgeons
Dyers	Millhands	Truck Drivers
Electricians	Musicians	Ushers
Engineers	Office Workers	Vulcanizers
Farmers	Oilers	Waiters
Factory Workers	Operators	Warehousemen
Firemen	Orderlies	Watchmakers
Floorhands	Painters	Weavers
Florists	Plasterers	Welders
Foremen	Platers	

Geographical Distribution of Students

During the school year 1939-40 the following cities and towns were represented in the student body of the Lincoln Technical Institute:

Abington	Foxboro	Quincy
Allston	Gloucester	Randolph
Amesbury	Greenwood	Reading
Andover	Haverhill	Revere
Arlington	Hingham	Roslindale
Ashland	Hyde Park	Roxbury
Attleboro	Ipswich	Salem
Ayer	Jamaica Plain	Saylesville, R. I.
Bedford	Lawrence	Saugus
Belmont	Lexington	Saxonville
Beverly	Lynn	Scituate
Billerica	Malden	Somerville
Bondville	Manchester, N. H.	Stoneham
Boston	Mansfield	Swampscott
Braintree	Marblehead	Taunton
Brighton	Marlborough	Wakefield
Brockton	Mattapan	Waltham
Brookline	Maynard	Walpole
Cambridge	Medfield	Watertown
Canton	Medford	Wellesley
Charlestown	Melrose	Weston
Chelsea	Methuen	Westwood
Cohasset	Milton	Weymouth
Concord	Natick	Whitman
Cranston, R. I.	Needham	Wilmington
Dedham	Newburyport	Winchester
Dorchester	Newton	Winthrop
Egypt	Norwood	Wollaston
Everett	Pawtucket, R. I.	Woburn
Framingham	Peabody	
Franklin	Providence, R. I.	

High Schools Represented

During the year 1939-40 the following high schools were represented in the student body:

Abington, Pa. High School	Cathedral High School
Arlington High School	Central Evening High School
Athens High School	Charlestown High School
Attleboro High School	Chelmsford High School
Ayer High School	Chelsea High School
Belmont High School	Chicopee High School
Bethel, Conn. High School	Commerce (High School of)
Beverly High School	Concord High School
Beverly Trade School	Cranston, R. I. High School
Blackhead & Broad Cove NFLD	Dedham High School
Boston Public Latin School	Dorchester High for Boys
Boston Trade School	East Boston High School
Bradford High School	English High School
Braintree High School	Everett High School
Brockton High School	Everett Trade School
Brookline High School	Foxboro High School
Brooklyn, N. Y. High School	Framingham High School
Browne & Nichols School	Gardner High School
Cambridge High and Latin School	Gate of Heaven High School
Cambridge School, Kendal Green	Gloucester High School

Goddard Seminary
 Greenfield High School
 Hammond, Wisc. High School
 Hartford, Vt. High School
 Haverhill High School
 Hebron Academy
 Holyoke High School
 Houlton, Me. High School
 Howe High School
 Hyde Park High School
 Ipswich High School
 Johnson High School
 Lawrence High School
 Lexington High School
 Lincoln Preparatory School
 Lynn Classical High School
 Lynn English High School
 Malden High School
 Manhasset High School
 Marblehead High School
 Marlboro High School
 Mechanic Arts High School
 Medfield High School
 Medford High School
 Melrose High School
 Merrimack High School
 Milton High School
 Mission Church High School
 Morristown High School
 Nashua, N. H. High School
 Natick High School
 Needham High School
 New Bedford High School
 Newburyport High School
 New Hampton School for Boys, N. H.
 Newton High School
 North Quincy High School
 Norwood High School
 Passaic, N. J. High School
 Pawtucket, R. I. High School
 Peabody High School
 Provincetown High School
 Quincy High School
 Reading High School

Revere High School
 Rindge Technical High School
 Roslindale High School
 Roxbury Memorial High School
 Sacred Heart High School
 Salem High School
 Saugus High School
 Scituate High School
 Somersworth High School
 Somerville High School
 South Kingston High School
 Stetson High School
 St. Clement High School
 St. James High School
 St. James Atonement College
 St. John's High School
 St. Mary's High School
 Stoneham High School
 Stonington, Me. High School
 St. Raphael's Academy
 Stoughton High School
 Swampscott High School
 Tabor Academy
 Taunton High School
 Thayer Academy
 Valatie, N. Y. High School
 Vineland, N. J. High School
 Wakefield High School
 Walpole High School
 Waltham High School
 Watertown High School
 Wellesley High School
 Weston High School
 West Kent High School
 Weymouth High School
 Whitman High School
 Wilmington High School
 Winchester High School
 Winthrop High School
 Woburn High School
 Wolcott, N. Y. High School
 Woodbury High School
 Worcester High School

Location of School

The work of the school is conducted in three buildings of Northeastern University situated on an eight acre campus on Huntington Avenue just beyond Massachusetts Avenue opposite the Boston Opera House.

The West Building at 360 Huntington Avenue contains the headquarters of the school. This building has more than one hundred thousand square feet of space and is adequately equipped with classroom, drawing room, and laboratory facilities. In the basement are the check-room, the Bookstore, and the Husky Hut.

The East Building of the University is the educational wing of

the Huntington Avenue Branch of the Young Men's Christian Association. It contains the library, classrooms, and the Chemical laboratories.

The *South Building* is situated in rear of the East Building and contains several classrooms, and the Electrical and Biological laboratories.

Transportation

The School is easily reached from the North and South Stations, from the various points of the Boston Elevated System, and by automobile.

The railroad systems entering Boston issue students' tickets to students under twenty-one years of age. Applications for these may be obtained at a railroad office and presented at the school office for signature.

Parking

Ample parking facilities are available in the rear of the East Building and in the area adjacent to the West Building.

Library

A large and well equipped library is available for the use of students. The reading rooms are open from 9 a.m. to 10.30 p.m. on week days, and from 9 a.m. to 10 p.m. on Saturdays. Students have also the privilege of securing books from the Boston Public Library and its branches. To obtain this privilege application should be made to the Librarian, who will furnish the applicant with the necessary blanks.

Text Books and Supplies

The Lincoln Technical Institute enjoys the facilities of the Northeastern University Bookstore, which is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the Institute may be purchased at the Bookstore. In addition, the Bookstore also carries a large number of general supplies. It should be pointed out that students attending Freshman Drawing should be prepared to expend a sum of approximately \$5.00 for drawing supplies, exclusive of the cost of a satisfactory set of drawing instruments.

Visitors

Visitors are always welcome at one class session in any department. Those who wish to visit any of the classes should call at the school office and obtain a visitor's card signed by the Dean.

Notify the Office Immediately

- (a) Of any change of address;
- (b) Of withdrawal from any course — otherwise the fee for that course will be charged;
- (c) Of withdrawal from the school — giving the date of the last lecture attended.

Interviews and Educational Guidance

Prospective students or those desiring advice or guidance with regard to any part of the school work or curricula, or who wish assistance in the solution of their educational problems, should note the fact that interviews are available without obligation, and that the officers of the school will do their utmost to see that a program is designed which is the most satisfactory for the individual students. In certain cases, other institutions may be recommended which suit the student's needs better. Furthermore it is important that those with educational problems to solve should realize the necessity for care in approaching educational work so that the program selected will be on the best educational basis.

Awards for Scholastic Achievements

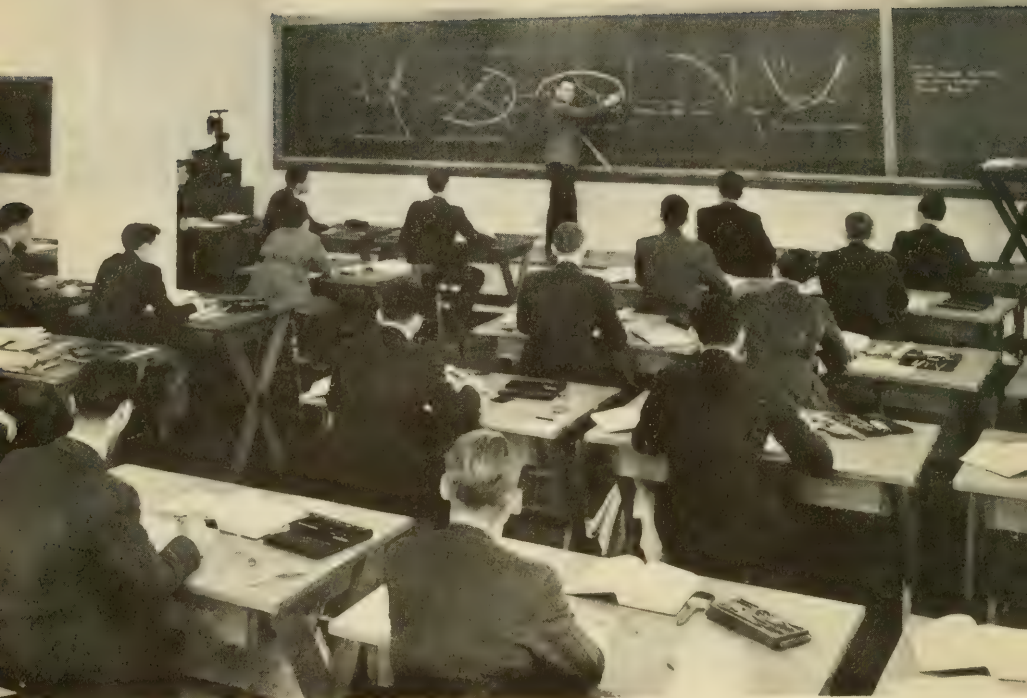
For the school year, 1940-41, the Executive Council has offered the following scholarships. To the highest ranking Sub-Freshman, Freshman, Sophomore and Junior who returns for the following school year a scholarship of \$60. To the second highest ranking Sub-Freshman, Freshman, Sophomore and Junior who returns for the following school year a scholarship of \$30.

These scholarships will be awarded only to students pursuing a full program.

The winners of these scholarships for the past school year were:

<i>Sub-Freshmen</i>	Sidney H. Welsh	Albert H. Thibodeau
<i>Freshmen</i>	Edward C. Gaudet	Charles B. Robinson
<i>Sophomores</i>	John L. Sienczyk	Wallace W. Wilder
<i>Juniors</i>	Giacomo J. Ristagno	Morris Katzman

The awards were made at the Annual Commencement exercises held in Bates Hall on June 15, 1939.



ONE OF THE CLASSROOMS

A SECTION OF THE CHEMISTRY LABORATORY



Requirements for Admission

Regular Students

Applicants for admission who present evidence of completion of an approved secondary school course, or the equivalent of fifteen units (including one unit in Algebra and one in Plane Geometry) may be admitted as regular students, candidates for the Title of Associate in Engineering and also eligible to proceed later, if so desired, to the Degree of Bachelor of Business Administration in Engineering and Management offered by Northeastern University School of Business.

Conditioned Students

Applicants for admission who do not meet the full requirements for admission as regular students may, at the discretion of the Committee on Admission, be admitted as conditioned students provided such secondary school work as has been completed embraces one unit of Algebra and one unit of Plane Geometry. A conditioned student whose scholarship is satisfactory but who has not removed his conditions within the time specified by the Committee on Admission may be permitted to continue with his program of studies but on the completion of the chosen four year curriculum, he will receive a diploma indicating the completion of the program, but not carrying the award of the Title of Associate in Engineering. A conditioned student may remove his conditions and be reclassified as a regular student by one of the following methods:

- (a) By applying courses which they have completed in the Lincoln Technical Institute at the rate of one unit for each two and one-half semester hours. (A course cannot be credited both towards the removal of admission conditions and towards the Title or Degree.)
- (b) By applying units for work completed in an approved secondary school, such as the Lincoln Preparatory School, whose courses are conducted at convenient evening hours.
- (c) By passing the examinations of the College Entrance Examination Board.

Special Students

Students who wish to register for a special program or for single courses will be admitted as special students, not candidates for the diploma or Title, provided their previous education and training permit them to pursue the courses with profit.

Programs are planned to meet individual needs and should prove of benefit to those who wish rapid and immediate knowledge of certain fields, whether to supplement former training or to obtain preparation which will permit them to enter a new line of endeavor.

Late Registration

Students should avoid late registration. Those who find it necessary to register late may be permitted to enter the school provided that they have not lost so much work as to render it unlikely that they will succeed in their courses.

Classification of Students

Division A

Students who enter school at the beginning of the normal school year in September are termed Division A students. Programs for these students can be arranged so that the work of the school year is completed by May or in early June by attendance three evenings a week. Students, however, may elect to carry a lighter scholastic load than the regular program. Summer courses are not necessary for Division A students.

Division B

Students entering school in January are termed Division B students. These students terminate the first part of their studies by the end of May, attending three evenings a week. However, to complete the work of the Freshman year, it is necessary that they attend a summer course which meets for two evenings a week. Students pursuing this program may continue with the Sophomore program in the September of the year in which they enter school.

Summer attendance is not compulsory, but in the event that a student does not pursue a summer course, attendance is necessary over a period of five school years to complete graduation requirements.

Sub-Freshmen

Students who have not completed Algebra and Geometry, or those who wish to review these subjects before undertaking the work of the Freshman year because of the remoteness of their former period of study are termed Sub-Freshmen. Their course will consist of Sub-Freshman Mathematics which embraces complete courses in Algebra and Geometry and the Freshman courses in Engineering Mathematics and Engineering Drawing. These courses extend for thirty-two weeks. During the Summer Term the program consists of the Freshman course in Physics.

Students who complete these courses will be admitted to the work of the Sophomore year. This program permits them to save a year which would otherwise be lost, since it enables them to graduate in the customary period of four years.

Students are admitted to this course only after a personal interview with the Dean.

Tuition and Other Charges

Matriculation Fee

A Matriculation Fee of \$5.00 is payable by each student on his initial entrance to the school. This fee is not returnable, except where the student is refused admission to the school.

Tuition Fees

Division A

The tuition charges and laboratory fees may be determined by consulting the alphabetical list of courses on page 57. These charges are usually \$120 for a full program and may be paid in six equal installments as follows:

First payment	On registration
Second payment	Week of October 21-26
Third payment	Week of December 2-7
Fourth payment	Week of January 20-25
Fifth payment	Week of March 3-8
Sixth payment	Week of April 14-18

Division B

Students entering Division B may carry only two courses between January and June, the fees for which are \$80, payable in four equal installments as follows:

First payment	On registration
Second payment	Week of February 24-28
Third payment	Week of March 24-28
Fourth payment	Week of April 21-25

In addition there is a summer course for Division B students the fees for which are \$40, payable in two equal installments as follows:

First payment	On registration
Second payment	Week of July 21-25

In certain cases even the installment plan indicated above for Division A or Division B will not meet the needs of many deserving students. Such students are requested to confer with an officer of the school regarding a satisfactory plan for the payment of fees.

The Officers of Administration require that students abide by the terms of their agreement and that all students make payments on the dates specified.

Scholarships

The Executive Council has made available a few scholarships to assist needy students of good mental capacity who because of financial limitations might be deprived of educational opportunities. The award when a scholarship is granted is never in excess of one-half of the student's tuition fees for the year.

Tuition Regulations

Charges for Partial Program

In cases where students are not carrying a full program the tuition fees are payable as follows:

- (a) If the total charges are \$80.00 or more, fees may be paid in six installments.
- (b) If the charges are \$40.00 or more but less than \$80.00 fees are paid in four equal installments.
- (c) If the charges are less than \$40.00, fees are payable in two successive monthly installments.

No deduction from tuition fees is made because of late enrollment.

Bills

The school endeavors to mail bills to students ten days in advance of the payment date and also issues announcements in class to the effect that a payment date is falling due. In those cases where students have not received bills, they should intimate the fact to the school office. Students are reminded that the non-receipt of a bill does not exempt them from the responsibility of meeting their payments on the dates assigned and that failure to do so will cause the student's exclusion from class until he has conferred with an officer of the school.

In the event that absence from school is unavoidable at payment periods, students are advised to mail check or money order.

Students may obtain a statement of their accounts at any time.

Charges for Partial Attendance

In the event of a student's withdrawal from school, he is charged on a pro rata basis for the weeks he has attended. These charges are as follows:

34 week courses — 4% of the total charges for each week of attendance.

20 week courses — 6% of the total charges for each week of attendance.

17 week courses — 8% of the total charges for each week of attendance.

The same charges are applicable in the event that a student abandons a part of his program. In addition the full Laboratory Fee is charged in those cases where a student is pursuing a Science.

Laboratory Fees

All students taking courses which require laboratory work are charged laboratory fees in accordance with the following rates:

Aeronautical Laboratory	\$5.00
Air Conditioning Laboratory	5.00
Analytical Chemistry Laboratory	15.00
Electrical Laboratory I, II, III	5.00
Engineering Laboratory, I, II	5.00
Industrial Chemistry Laboratory	15.00
Inorganic Chemistry Laboratory	15.00
Organic Chemistry Laboratory	15.00

Laboratory fees are not returnable.

For students taking Chemistry there is in addition a Chemistry laboratory deposit of \$5.00, the unused portion of which will be refunded after deductions for breakages.

Special Examination Fees

The fee for each special examination for advanced standing, for conditioned students, or for students who have for justifiable cause omitted to take the regularly scheduled examinations is \$3. In those cases where students have for justifiable cause omitted to take a mid-term or pre-announced quiz, an examination fee of \$1.50 will be charged for the make-up quiz. In each case the fee must be paid before the examination is taken.

Charges for Damages

Students who damage apparatus in the laboratories or who willfully destroy school property will be responsible for the replacement of such damaged articles or for the cost of replacement where this is undertaken by the school.

Cost of Drawing Materials

Students taking Freshman Drawing should be prepared to expend a sum of approximately \$5.00 for drawing supplies, exclusive of cost of a satisfactory set of drawing instruments.

Diploma Fee

On completing the curricular requirements for the Title of Associate in Engineering or for a certificate of completion the student will pay a diploma fee of \$10. This fee must be paid by May 15th in the year of the student's graduation.

Refund Policy

Students who are forced to withdraw from a course or from the school are expected to notify the school office by completing the withdrawal blank which will be furnished.

Since the school assumes the obligation of carrying the student throughout the year for which he registers, and since the instruction and accommodation are provided on a yearly basis, the Executive Council of the Lincoln Technical Institute has ruled as follows:

- A. Application for refunds must be presented within forty-five days after withdrawal from school.
- B. Refund in the case of complete withdrawal from school will be granted by the Committee on Withdrawals for reasons which they deem adequate. Among the reasons deemed adequate are the following:
 - (a) Personal illness.
 - (b) Change of employment by direction of employer whether in the schedule of time or in place of employment.
 - (c) The situation where the student becomes the sole or partial support of the family so as to make it impossible for him to continue his studies.
 - (d) Loss of position.
 - (e) Change of residence.
 - (f) A voluntary change of employment, the hours or the residence being such that he is unable to continue attendance.

In all the above cases it is expected that a medical certificate, letter from employer, or other appropriate substantiating documentary evidence will be produced by the student.

Administrative Regulations

Applications for Admission

APPLICATIONS for admission should be filed as early as possible in order that the necessary investigations may be made and the status of each student definitely determined before the opening day.

Registration

Each student is required to present himself at the School Office, and to have his course approved by the Dean to complete his registration. A student is expected to pay the first tuition installment and other fees required before beginning attendance.

Late registration will be permitted only at the discretion of the Dean.

The School Year

The school year is divided into two semesters of seventeen weeks each. The first semester extends from September 16 to January 24, and the second semester from January 27 to May 23, except that make-up sessions for public holidays may extend either term. Attention is drawn to the fact that Division B students begin their studies on January 13.

Graduation Requirements

Students may register for single subjects or for complete courses, provided such registration meets with the approval of the Dean; but to receive the Title of Associate in Engineering or certificate of completion the student must fulfill the following conditions:

- a. Regardless of the advanced standing credit he receives, he must have been in attendance for at least a year preceding the date on which he expects to graduate; that is, he must complete at least one full year's work in the Lincoln Technical Institute.
- b. He must complete all the courses of his particular curriculum, either by attendance at this Institute, or by receiving advanced standing credit for those courses, or the equivalent of those courses, as determined by the Dean.
- c. He must pass such final examinations as are required in the courses he has pursued. The various curricula have been arranged so that the courses can be completed in four years. However, an extension of time will be granted to those who wish to take longer to meet the requirements for graduation.

Sessions

Classes meet on week-day evenings. There are no classes on Saturdays. A full schedule will include three evenings a week. As a rule classes are scheduled from 7 p.m. till 9 p.m., although occasionally classes continue until 9.30 p.m. Laboratory periods in Chemistry are of four hours' duration.

Attendance Requirements

A careful record of attendance upon class exercises is kept for each student. Absence from regularly scheduled classes on any subject will seriously affect the standing of the student. It may cause the removal of certain subjects from his schedule and the listing of these as "conditioned subjects." However, if reasonable excuse for absence be presented, the student may be allowed to make up the time lost, and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course shall designate.

Students who are unavoidably absent from class may receive the home work assignments by telephoning the school office.

A minimum attendance record of 70% must be maintained in all classes before a student will be admitted to examination.

Examinations and Quizzes

Examinations and quizzes are held throughout the term at the discretion of the instructors. Quizzes are to be made up at the discretion of the instructor. The fee for each make-up quiz is \$1.50. Final examinations are required upon the completion of all courses. The following system of grading is used:

A	—	90 to 100	—	Excellent
B	—	80 " 89	—	Good
C	—	70 " 79	—	Fair
D	—	60 " 69	—	Lowest Passing Grade
F	—	50 " 59	—	Conditioned Failure
FF	—	Below 50	—	Complete Failure

A student marked "F" may receive one special examination. If he fails in that, he must repeat the course. A student marked "FF" must repeat the course. The fee for each special examination is \$3. Grades and reports are mailed to the students and will not be given out at the School Office. Under no circumstances will grades be given over the telephone.

It is to be noted that no student will be permitted to graduate who does not maintain a "C" average and that students who have not maintained such an average by the end of the Sophomore year will not be permitted to continue in school.

Transfers

Students are not permitted to change from one course to another without first consulting the Dean and receiving a Transfer Order signed by him.

Reports of Standing

An informal report of the student's standing is issued at the end of the first semester; and the formal report, covering the year's record, is issued at the close of each year.

In the case of students who are under twenty-one years of age, reports may be sent to parents in the event of unsatisfactory work on the part of the student, non-compliance with administrative regulations, continued absence, and withdrawal. Parents of minors may obtain reports at any time on request.

Students Admitted with Advanced Standing

Students who, upon admission, were granted provisional advanced standing credit, but did not present evidence of their eligibility to such credit, shall not be granted the diploma of the school, unless the credentials are presented to the Dean before the close of the first year of attendance.

Methods of Instruction

Instruction is given by means of lectures, recitations, laboratory work, and practical work in the drawing rooms. Great value is set upon the educational effect of these exercises, which constitute the foundation of each of the courses. Oral and written examinations are held at the discretion of the instructors.

Subjects of Instruction

On pages 57 to 67 will be found a detailed statement of the scope of the subjects offered in the various courses. The subjects are numbered for convenience of reference in consulting the various curriculum schedules.

Required courses, and those prerequisite thereto, must have been successfully pursued before any advanced course may be taken.

The student must have become proficient in all the elementary subjects before undertaking advanced work, except that Special Students who by virtue of experience can profit by an advanced course may be admitted to such a course by the Dean.

By careful consideration of the curriculum schedules, in connection with the description of subjects, the applicant for a special course may select, for the earlier part of that course, such subjects as will enable him to pursue later those more advanced subjects which he may particularly desire.

Elective Subjects

Students electing any course not required in their curriculum will be required to take all examinations in that course, and to attain a passing grade in it before they will be eligible for a diploma.

Diplomas

Upon the satisfactory completion of any of the regular curricula, and the fulfillment of the conditions on page 31 the student is entitled to receive a diploma. A graduation fee of ten dollars is required of all candidates for a diploma. This fee must be paid on or before May 15th in the year in which the student is to graduate.

The diploma with honor will be awarded to those students who have completed the curriculum for which they registered with an average of at least 85%.

Diplomas are awarded at the annual commencement exercises. These are held about the middle of June.

Information Regarding Courses

Curricular Programs Leading to the Title of Associate in Engineering

The Lincoln Technical Institute offers four-year courses in the following fields:

- Architectural Engineering
- Chemistry
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering with Aeronautical or Air Conditioning Options
- Structural Engineering

On the satisfactory completion of a prescribed four-year course involving not less than 900 classroom hours the Title of Associate in Engineering is awarded to all regular students. Those students who entered with conditions and who have not been reclassified as regular students will be awarded a diploma signifying the completion of the courses but not carrying the award of the Title of Associate in Engineering.

All these courses are of strictly college grade. In those cases where students are unable, because of circumstances, to carry all of the work prescribed in any year, an extension of time will be granted by the Dean, who will determine which subjects shall be excluded, and also the order in which the omitted subjects shall later be studied.

Schedules of the various curricula are given on the following pages. The work of the first year is the same for all curricula except the special course in Chemistry described on page 38.

When a student elects a curriculum he is expected to complete all the subjects in that curriculum in order to receive the Title or a diploma, unless he has the permission of the Dean to drop or omit certain subjects and substitute others for those omitted.

Architectural Engineering Course

Leading to the Title of Associate in Engineering

Architectural Engineering is a profession which requires not only an intimate knowledge of the properties of steel, concrete, masonry, timber, and all of the other materials which enter into the structure of the building, but an acquaintance with the various styles of architecture as developed in previous civilizations, as well as the tendencies of modern practice, in order that these materials may be used and harmonize with the design of the building.

The course in Architectural Engineering undertakes to furnish the fundamental training necessary to start the student in his career. It prepares for the individual practice of Architecture, or for the supervision of construction. This curriculum will be of value to those who at present occupy minor positions in the architectural profession, and it is also possible for a student who plans to obtain employment in an architect's office to receive in his early training sufficient preparation for such work. He may then advance by combining theory with practice.

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Architectural Drawing
Applied Mechanics

Third Year

Strength of Materials
Architectural Design
Materials of Construction
and Foundations (1)
Hydraulics (2)

Fourth Year

Engineering Structures
*Advanced Architectural Design
Concrete (1)
Concrete Design (2)

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards a six-year program leading to the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

*Students who plan to pursue a Degree Program must substitute Business and Industrial Management for this course.

Chemistry Course

Leading to the Title of Associate in Engineering

THE Science of Chemistry and Chemical Engineering have undergone a marked development during the past thirty years. One has only to pause for a moment and consider the tremendous changes that have taken place in our ordinary lives during that period to recognize not only the important part that has been played by the Chemist and the Engineer, but also to appreciate the important part that they are likely to play in the future.

The Chemist is in demand in every industry. His aid is sought in the operation of plants for the production of such products as gas, coke, oil, paint, fertilizers, drugs, etc. His help is requested in the development of more economical processes, in the potential use of by-products, and in the actual discovery of new products in private laboratories or in the research laboratories of industry.

As a result of the training offered by this curriculum a student has the opportunity of entering the field of Chemistry at a point appropriate to his period of study. The training is sufficiently general so that a variety of industries is open to him, yet deals quite specifically with particular industries in which a person may be definitely interested.

First Year

Engineering Mathematics
Physics
Engineering Drawing

Second Year

Advanced Mathematics
Inorganic Chemistry Lectures
Inorganic Chemistry Laboratory

Third Year

Applied Mechanics
Analytical Chemistry Lectures
Analytical Chemistry Laboratory

Fourth Year

Electricity
Organic Chemistry Lectures
Organic Chemistry Laboratory

Fifth Year

Industrial Chemistry Lectures
Industrial Chemistry Laboratory
Business and Industrial Management

Chemistry Course

Leading to a Diploma

First Year

Inorganic Chemistry Lectures
Inorganic Chemistry Laboratory

Second Year

Qualitative Analysis Lectures (1)
Qualitative Analysis Laboratory (1)
Quantitative Analysis Lectures (2)
Quantitative Analysis Laboratory (2)

Third Year

Organic Chemistry Lectures
Organic Chemistry Laboratory

Fourth Year

Industrial Chemistry Lectures
Industrial Chemistry Laboratory

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards the Title of Associate in Engineering and the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business. Students wishing to pursue programs for the Title or for the Degree should consult the Dean regarding particulars.

Civil Engineering Course

Leading to the Title of Associate in Engineering

The purpose of this curriculum is to give the student an education in those subjects which form the basis of all branches of technical education, and a special training in those subjects comprised under the term "Civil Engineering." It is designed to give the student sound training in the sciences upon which professional practice is based.

Civil Engineering covers such a broad field that no one can become expert in its whole extent. It includes Topographical Engineering, Municipal Engineering, and Railroad Engineering. It covers land surveying, and construction of sewers, water works, roads and streets. All these branches of Engineering rest, however, upon a relatively compact body of principles. The students are trained in these principles by practice in the class-room and drawing-room, and, in addition are familiarized with the equipment used in Civil Engineering.

The curriculum is designed to prepare the student to take up the work of assisting in the location and construction of steam and electric railways, sewerage and water-supply systems.

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Surveying
Applied Mechanics

Third Year

Strength of Materials
Highway Engineering
Materials of Construction
and Foundations (1)
Hydraulics (2)

Fourth Year

Engineering Structures
Concrete (1)
Concrete Design (2)
*Structural Drawing

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards a six-year program leading to the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

*Students who plan to pursue a Degree Program must substitute Business and Industrial Management for this course.

Electrical Engineering Course

Leading to the Title of Associate in Engineering

The applications of Electricity have developed rapidly in recent years and to attain proficiency in this field students must have a good working knowledge of Mathematics and Physics. It is essential that students planning to take this course should realize the fundamental necessity of obtaining a solid foundation in these subjects.

The instruction has been carefully balanced between recitations, lectures, home work, reports, and laboratory tests in order to develop in the student the power of perception, of rational thinking and of applying theoretical principles to practical problems.

It is not the purpose of the curriculum to attempt the impossible — to turn out fully trained engineers in any of the various branches of the science. It is designed to lay a thorough foundation for future progress along the lines of work which may particularly appeal to the individual, and give him an adequate working acquaintance with the essential principles which underlie each of the more specialized branches of professional activity. *Parallel with the theoretical work runs a carefully planned course of laboratory work which is intended to develop the student's powers of planning work for himself.*

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Electricity I
Electrical Laboratory I

Third Year

Applied Mechanics
Electricity II
Electrical Laboratory II

Fourth Year

*Heat Engineering I (1)
*Heat Engineering II (2)
Electricity III
Electrical Laboratory III

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards a six-year program leading to the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

*Students who plan to pursue a Degree Program must substitute Business and Industrial Management for this course.

Mechanical Engineering Course

Leading to the Title of Associate in Engineering

This curriculum is designed to give a foundation in those fundamental subjects which form the basis for all professional engineering practice, and especially to equip the engineer with a knowledge of the various phases of Mechanical Engineering. The course embraces instruction by textbook, lecture, drawing-room and laboratory.

All the mathematics required in the designing of machinery is given during the first two years so as to prepare for the designing and engineering courses given during the third and fourth years. The sequence of subjects from those of an elementary nature to Heat Engineering, Machine Design, etc., is arranged so that the student may have a complete understanding of the advanced courses.

Air conditioning and Aeronautical options are available in this field.

The curriculum gives the student a good theoretical training and in addition devotes sufficient time to practical applications of theory so that he obtains a training which equips him for advancement in the field of Mechanical Engineering.

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Machine Drawing
Applied Mechanics

Third Year

Strength of Materials
Mechanism (1)
Hydraulics (2)
Heat Engineering I (1)
Heat Engineering II (2)

Fourth Year

Machine Design
*Engineering Laboratory I
Engineering Laboratory II

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards a six-year program leading to the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

*Students who plan to pursue a Degree Program must substitute Business and Industrial Management for this course.

****Aeronautical Option**

(The first two years of this program are identical with those of the Mechanical Engineering program.)

Third Year

Strength of Materials
Heat Engineering I (1)
Aeronautical Laboratory I (2)
Mechanism (1)
Airplane Engine Design (2)

Fourth Year

Aeronautical Laboratory
Airplane Design
*Advanced Airplane Engine Design

****Air Conditioning Option**

(The first two years of this program are identical with those of the Mechanical Engineering program.)

Third Year

Strength of Materials
Heat Engineering I (1)
Heat Engineering II (2)
Mechanism (1)
Principles of Air Conditioning (2)

Fourth Year

Heating and Air Conditioning Design
Air Conditioning Laboratory
Business and Industrial Management

- (1) signifies First Semester Course
(2) signifies Second Semester Course

These courses carry credit towards a six-year program leading to the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

*Students who plan to pursue a Degree Program must substitute Business and Industrial Management for this course.

**These options will be offered only if sufficient students enroll.

Structural Engineering Course

Leading to the Title of Associate in Engineering

The purpose of this curriculum is to give the student a special training in those subjects included in the term "Structural Engineering." It is designed to give the student sound and thorough training in the science on which professional practice is based.

Structural Engineering covers such a broad field that no one can become expert in its whole extent. It includes the design and construction of girders, columns, roofs, trusses, arches, bridges, buildings, walks, dams, foundations, and all fixed structures and movable bridges. It includes a knowledge of the relative merits of the design and construction of buildings, bridges and structures composed of different materials used by the engineer, such as concrete, reinforced concrete, timber, cast iron, and steel.

The curriculum is so arranged as to prepare the student to take up the work of assisting in the design and construction of structures; to undertake intelligently supervision of erection work in the field and general contracting.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Structural Drawing
Applied Mechanics

Third Year

Strength of Materials
Structural Design
Materials of Construction
and Foundations (1)
Hydraulics (2)

Fourth Year

Engineering Structures
*Advanced Structural Design
Concrete (1)
Concrete Design (2)

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards a six-year program leading to the Degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

*Students who plan to pursue a Degree Program must substitute Business and Industrial Management for this course.

Curricular Programs Leading to a Degree

THE Lincoln Technical Institute works in conjunction with the School of Business, Northeastern University, in offering a six-year program leading to a degree of Bachelor of Business Administration in Engineering and Management offered by the School of Business. This degree is offered with the following majors: Aeronautical, Air Conditioning, Architectural, Civil, Electrical, Mechanical, and Structural. A similar degree course is available with a Chemistry major, particulars of which are furnished on page 37.

In a recent study made of engineering graduates it was quoted that 62.1% entered industrial, commercial and financial fields where business courses, particularly in management and finance, would have substantially increased their value. Also, of the 25% entering professional practice or teaching, a large number would have benefited if they had received beforehand some form of business training.

The combination of Engineering and Business subjects is a valuable one as demonstrated by surveys undertaken by various engineering societies and colleges:

Fields of Work of Engineering Graduates

	Number	Per Cent	
Industrial	985	41.3	} 62.1%
Commercial	387	16.3	
Financial	108	4.5	
Professional	595	25.0	
Governmental and Miscellaneous	306	12.9	
	2,381	100.0	

Students pursuing a program of Engineering and Management subjects ordinarily complete the work required for the Title of Associate in Engineering before starting business study. The following minimum credits and courses are required to meet degree requirements.

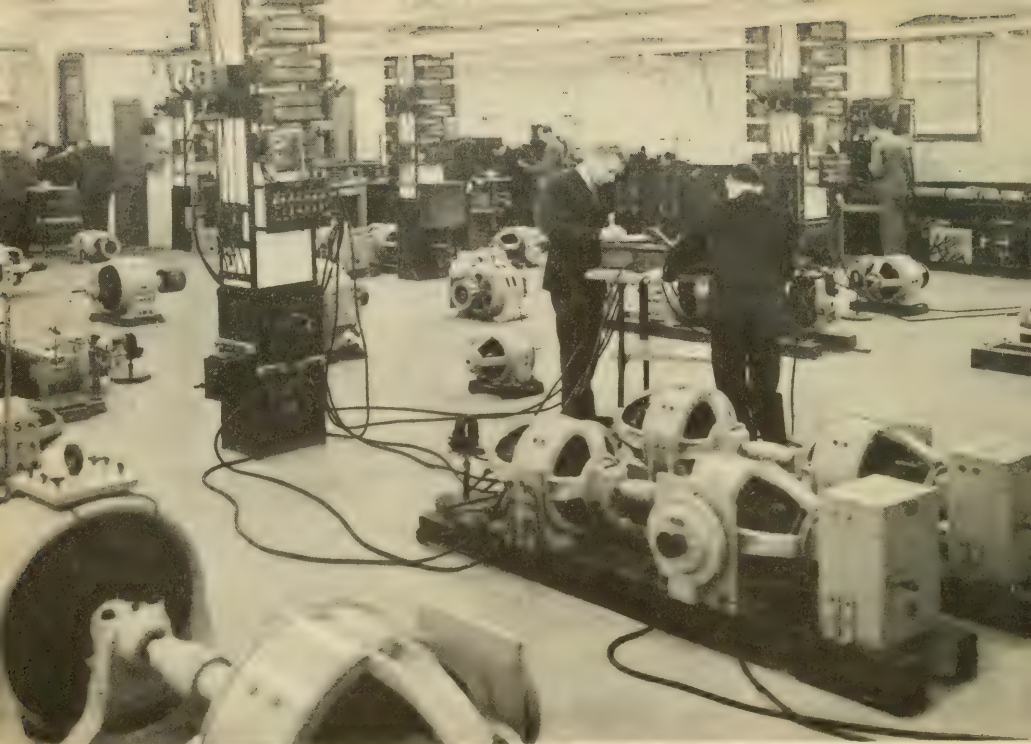
General Course

*Leading to the B.B.A. Degree in Engineering and
Management*

	Hours	Semester
<i>Lincoln Technical Institute:</i>		
Eleven approved full courses in chosen engineering program or their equivalent (Any of the curricula except Chemistry* listed on page 36 to page 43).		55
<i>School of Business:</i>		
Accounting Aids to Management	5	
Business Reports and Conferences	2½	
Business Economics	5	
Financial Organization	5	
Business and Industrial Management	5	
Principles of Production	2½	
Scientific Management	2½	
Principles of Purchasing	2½	
Industrial Management Problems and Policies	5	35
**Business Readings		5
<i>Occupational Experience</i>		30
		125
Total Semester Hours Required for Degree		125

*Particulars of the Degree Course with a Chemistry Major are to be found on Page 47.

**In addition each student must register for a Business Readings Course for which there are no lectures. This course is designed to broaden the student's acquaintance with selected readings in the field of business.



A SECTION OF THE ELECTRICAL LABORATORIES



A PHYSICS DEMONSTRATION

Chemistry Course

*Leading to the B.B.A. Degree in Engineering and Management
with a Chemistry Major:*

First Year

Engineering Mathematics
Physics
Engineering Drawing

Second Year

Advanced Mathematics
Inorganic Chemistry Lectures
Inorganic Chemistry Laboratory

Third Year

Applied Mechanics
Analytical Chemistry Lectures
Analytical Chemistry Laboratory

Fourth Year

Electricity
Organic Chemistry Lectures
Organic Chemistry Laboratory

Fifth Year

Industrial Chemistry Lectures
Industrial Chemistry Laboratory
Business and Industrial Management

Sixth Year

Accounting Aids to Management
Business Reports and Conferences (2)
Principles of Purchasing (2)
Business Economics

Seventh Year

Industrial Management Problems and Policies
Principles of Production (2)
Scientific Management (2)
Financial Organization
*Business Readings

*In addition each student must register for a Business Readings Course for which there are no lectures. This course is designed to broaden the student's acquaintance with selected readings in the field of business.

(2) Signifies Second Semester Course.

Engineering Equipment

Field Instruments of Civil Engineering

For work in the field the Civil Engineering Department possesses various surveying instruments representing the principal makes and types in general use.

The equipment includes six surveyors' compasses, two Keuffel and Esser transits, five Buff and Buff transits, one Buff and Buff triangulation transit, three Berger transits, one Hutchinson transit, two Wissler transits, one Gurley transit, one Poole transit, three Berger levels, two Keuffel and Esser levels, two Buff and Buff levels, one Bausch and Lomb precise level, two Gurley plane tables, two Buff and Buff plane tables, two Keuffel and Esser plane tables, and one Berger plane table.

There are Locke hand levels, lining rods, leveling rods, stadia rods, tape rods, engineers' and surveyors' chains, steel and metallic tapes, one 100-foot Invar steel tape, and all the miscellaneous equipment necessary to outfit the parties that the instruments will accommodate. The extent of the equipment and scope of the field work itself are designed to train the student's judgment as to the relative merits of the various types of field instruments.

For instruction in advanced surveying the equipment consists of an Invar steel tape and base line tapes, with the necessary spring balances, thermometers, etc., for base line work. Equipment for converting some of the better transits into instruments capable of stellar and solar observations is available, together with a Berger solar transit. For triangulation a Berger 10 second repeating theodolite and a Buff and Buff 20 second repeating precise triangulation transit are used. A Buff and Buff Coast and Geodetic level and Coast and Geodetic level rod enables precise leveling. For barometric leveling there is an aneroid barometer, and for hydrographic surveying a sextant and a Gurley electric current meter.

Electrical Engineering Laboratories

Dynamo Laboratory

This laboratory is equipped with sixty generators and motors of different types, the size and voltage ratings being selected to reduce as much as possible the risk from high voltage apparatus while making available to the student commercial apparatus such that

the various quantities it is desired to measure will be of reasonable dimensions.

Machines from five to twenty-five kilowatt capacity are used principally for this reason, but also because the student in his engineering practice early comes in contact with large and varied machinery in power houses and electrical plants generally.

For D. C. working, among others there are two sets of specially matched direct current six-kilowatt, 125-volt compound generators, which will work as shunt machines. Both pairs are driven individually by 15 H.P., 230-volt motors and used principally for parallel operation and similar work. A large 230-volt, 12 H.P., 200 R.P.M. Sturtevant motor is used for retardation tests, and an assortment of series, shunt and compound motors each fitted with brake pulleys, are used for routine motor testing.

A. C. Machinery

For A.C. working there is a fifteen-kilowatt (unity p.f.) three-phase, 240-volt alternator driven at sixty cycles, and a 7.5 kilowatt G. E. machine with special armature taps so that it may be used as single-phase, two-phase, three-phase, or six-phase synchronous motor.

There are also two 12.5 kilowatt (eighty per cent, p.f.) G. E. machines having each armature coil tapped out separately and giving various phase arrangements; a five-kilowatt Holtzer Cabot machine with three rotors, making it available as either a squirrel cage, wound rotor, or synchronous machine; a G. E. single-phase clutch motor, a type R. I. induction motor, a Wagner single-phase motor; two Wagner motors arranged for concatenation control, one five-kilowatt Holtzer three-phase synchronous converter, a Westinghouse 7.5-kilowatt two-phase motor, a ten horsepower Fynn-Weichsel Unity power factor motor, and a Westinghouse Synchronous Converter (10 kilowatt, 240 D. C. volts; one, three, and six phase; sixty cycles).

Recently installed in this laboratory is a General Electric Electrodynamometer of 15 horse power capacity, 2000 to 4000 R.P.M. direct connected on one end to a 10 horse power, 3 phase wound rotor induction motor. By means of external resistance control, this motor may have its speed reduced to 50% of its rated value and still carry its rated torque. The shaft extension on the other side of the dynamometer can be used for testing other electrical equipment of appropriate size, such as D. C. motors, single phase machinery, etc. A starting panel, including

latest types of automatic control equipment, has been installed with the electrodymanometer. There is also available a General Electric Metal-Tank Mercury Arc Rectifier Type R.H.A., 12.5 KW. 6-Phase 250-Volts, one of the few units that have been installed in educational institutions in the country.

Auxiliary Equipment

For transformers there are six single-phase G. E. type H units wound for 550 volts and 220-110 volts; a set of transformers with Scott connection taps, and a Type R. O. constant current transformer, primary winding for 220-190 volts and secondary for 6.6 amperes, 310 volts maximum fitted with a load of eighty candle power 6.6-amperes, sixty-watt nitrogen filled tungsten lamps, and a pair of 550-220 110 volts G. E. three-phase transformers of 5-kva capacity. There is also a full equipment of necessary control and regulating appliances and twelve movable test tables fitted with the necessary terminals, switches, circuit breakers, etc., for setting up the various combinations required from time to time. Each student when performing an experiment does the complete wiring, no apparatus in the laboratory being permanently wired up except as to its normal, self-contained circuits.

Power is supplied over a special set of feeders, from the Boston Edison system. Two power circuits are available: one of 50 K. W. capacity supplying 60 cycle, three phase, alternating current at 230 volts and the other providing 115-230 volt three wire direct current. For lowering the voltage in transformer testing G. E. induction regulators are used.

There are also speed governors and Tirrel regulators, both A. C. and D. C., capable of being used with any special machines found desirable at any particular time.

The Instrument Room is supplied with seventy-six high grade General Electric Company and Weston Electric Instrument Corporation alternating current voltmeters and ammeters, with a number of potential and current transformers, and with three-polyphase and sixteen single-phase indicating wattmeters, each of double current and double voltage ranges.

For direct current working there are sixty-one voltmeters (of triple range), ammeters and millivoltmeters of the above makes. There are twenty-five standard shunts of ranges from 10 to 100 amperes with uniform drops of fifty millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, non-inductive loading resistance, air core loading reactances, frequency indicators, power factor indicators, etc.

Chemical Laboratory Equipment

For experiments and investigations in Chemistry there are available two laboratories with the following equipment:

Analytical Chemistry

The laboratory for analytical chemistry is fully equipped for giving instruction in the usual undergraduate courses. Each student is supplied with the necessary Pyrex and Kimble laboratory glassware, Sillimanite and Coors porcelain, and the standard pieces of hardware. Special equipment of all needed types is available.

An adjoining balance room is equipped with Becker and Volland balances suitable for quantitative analytical work.

Industrial Chemistry

This laboratory is equipped with high pressure steam, vacuum, and the facilities usually found in a chemical laboratory. The various instruments and other chemical equipment necessary for the examination, testing, and analysis of the raw materials, intermediate and final products of the various industries are at hand.

The electrical equipment includes a Kimley electro-analysis machine for the determination of copper, lead, nickel, and zinc; a Hevi-duty electric furnace for use in ignition and combustion work; and a Freas drying oven capable of adjustment for various temperatures. Power is available in a variety of D. C. and A. C. voltages.

Inorganic Chemistry

In the locker assigned to each student for his individual use are the articles needed more or less continually by him as he does his experiments in the laboratory sessions. He has a liberal supply of glass, porcelain, metal, and other articles. Additional pieces of apparatus are issued from the stockroom or otherwise made available for use in particular experiments where they are needed.

The laboratories are equipped with general facilities appropriate to this course, such as gas, electricity, cold and hot water, fume hoods.

Organic Chemistry

The needed equipment is available. There are individual lockers and apparatus, fume hoods for general use, and special equipment, as required.

Drying operations are carried out with the aid of a steam-heated drying chamber, and electrically heated drying oven. Steam lines on the benches supply the steam for steam distillations, eliminating the necessity of individual steam generators.

Mechanical Engineering Laboratories

The Mechanical Engineering Department has well-equipped laboratories, containing new and modern machines run by steam, gasoline, water, and electricity. A separate high-pressure steam line connected directly with the boilers in the University's main power plant enables the steam-driven apparatus to be run with steam under full boiler pressure.

Steam Apparatus

The steam apparatus includes the following equipment. A Uniflow steam engine of fifty horsepower capacity and of the latest design, so equipped that a complete engine test may be run on the machine. The auxiliary apparatus connected with the engine includes a prony brake for measuring the output of the machine while a surface condenser is tied in with the exhaust line in order to obtain the steam consumption.

A Chicago steam-driven air compressor is arranged to make complete tests on both the steam and air ends of the machine. This compressor is also connected to a surface condenser.

A Warren direct-acting steam pump is connected up to run a standard pump test, the steam end being tied in with a surface condenser and the water end with a rectangular weir for measuring the quantity of water delivered by the pump.

A twelve horsepower Curtis steam turbine of the impulse single-stage type, to which is directly connected an absorption dynamometer or water brake, is available for testing. The steam end of this turbine is piped to a Worthington surface condenser and also to a Schutte-Koerting condenser.

A small Sturtevant horizontal steam engine is equipped for a complete test with a prony brake for the measurement of power output.

Other steam-driven apparatus includes a steam pulsometer pump, a steam injector, two small vertical steam engines for valve setting experiments, a heat exchanger for determining heat transfer between steam and water and a Lee steam turbine of twelve horsepower rating driving a two-stage centrifugal pump.

Apparatus is also available for experiments on the flow of steam through an orifice and for the determination of moisture content in steam through the use of throttling and separating steam calorimeters.

Hydraulic Equipment

The hydraulic equipment in the laboratory includes a two-stage centrifugal pump with a dual drive or separate drive as may be desired. The drive is either direct from a fifteen horsepower direct current motor or else direct from a Lee single-stage steam turbine.

A six-stage centrifugal pump direct-connected to a forty horsepower direct current motor has been installed for testing purposes. The motor, through a speed regulator, has a range in speed from 900 R.P.M. to 2200 R.P.M. The pump is rated at 180 G.P.M. against a head of 450 feet. The capacity of the pump is measured by a Venturi tube of the latest design. There is also a rotary pump driven direct by an electric motor.

Other machines for hydraulic experiments are a triplex power pump, driven by a three horsepower electric motor, a hydraulic turbine of the Pelton Wheel type, a small single-stage centrifugal pump driven directly by a $\frac{3}{4}$ -horsepower gasoline engine, a triangular and a rectangular weir for measuring quantities of water discharged by the various pumps in the laboratory, besides the necessary tanks, platform scales, and hook gages.

Internal Combustion Engines

Under the internal combustion laboratory equipment may be listed a Fairbanks-Morse ten horsepower gasoline and oil engine, so arranged that tests may be run with various kinds of fuels and complete test data obtained; a new Plymouth automobile engine arranged to run tests with different fuels and carburetors; and two gasoline airplane engines for demonstration purposes.

Several Diesel engines of various types have been installed, including a 30 H.P. high speed Fairbanks-Morse machine driving a 19 K.W. D. C. Generator, an auto truck Diesel, and two small engines for dismantling and demonstration purposes.

Refrigeration, Heating, and Air Conditioning

The refrigeration equipment includes a $\frac{3}{4}$ -ton Frick ammonia refrigerating machine equipped with a double pipe condenser, ammonia weighing tanks and a specially designed indicator, and a standard air-cooled Frigidaire sulphur dioxide machine. Both of these machines are arranged for testing purposes. A Triumph compressor is also available for demonstration work. Apparatus for the determination of heat transference through various substances is available.

A constant temperature room is equipped with apparatus for either heating or cooling. Additional equipment consists of a warm air pressure system with Timken oil burner equipment and complete automatic controls, a Fedders type unit heater, and oil burning equipment and controls for demonstration purposes.

For fan testing, a multi-blade blower of Sturtevant manufacture driven by an electric motor is set up for running different tests with varying capacity.

A Carrier air conditioner, motor driven, and equipped with automatic humidity control, is arranged for testing.

A domestic hot water and steam boiler completely equipped with electrical controls is arranged for testing.

Testing Material and Heat Treatment Equipment

The testing materials equipment includes a 50,000 pound Olsen Universal testing machine and a 300,000 pound Riehle Hydraulic testing machine of the latest design equipped for tension, compression, transverse bending, and shearing tests; a 2,000 pound automatic shot cement tester equipped with transverse tools; a 10,000 inch pound Riehle torsional testing machine; a 220 foot pound Riehle impact tester for Charpy Izod or tension tests; a White-Souther motor driven fatigue tester holding two specimens at one time; and a Ro-Tap sieve shaker with time switch and sieves for mechanical analysis of aggregate. Among the measuring instruments are Brinell and Olsen-Firth hardness testers; extensometers for tension, column, and beam tests, and a torsion meter.

For heat treatment, an electric furnace and a Stewart triple-purpose gas-fired furnace are available with pyrometers for temperature measurements.

For studying the effects of heat treatment, a large metallographic outfit of Bausch & Lomb make is used. This apparatus makes

possible a magnification of from 125 to 2600 diameters for inspection and taking photographs of crystalline structures of metals. Equipment is available for polishing and etching specimens in preparation for examination of the crystalline structure of the metal being studied.

Polaroid equipment for photo-elastic stress analysis is also available. A number of microscopes are also available.

Miscellaneous Equipment

In addition to the apparatus mentioned above, the oil testing equipment includes a Saybolt Universal viscosimeter for viscosity determination, a Cleveland open cup tester for determining the flash point and fire point of different grades of oil, a Conradson carbon residue apparatus, a steam emulsion apparatus, a water power centrifuge, a cloud and pour test apparatus, a Union oil colorimeter for color number determination, and a Thurston friction oil tester for determining the durability and lubricating prospects of oils.

An Emerson fuel calorimeter is used for finding the calorific content of solid and liquid fuels, and a Junkers gas calorimeter is available for determining the heat content of gaseous fuels. For calibrating gages, two dead weight gage testers of 200 pounds and 500 pounds capacity are used for pressure gages, while for vacuum gages a water aspirator and a motor driven vacuum pump are available.

For measuring the flow of water in pipe lines, a Pitot tube, orifice, Venturi meter, and water meter are located in a pipe line for testing.

Apparatus for measuring flow of air includes a Pitot tube, an orifice, and an anemometer, besides the necessary draft gages.

Apparatus for measuring flow of steam consists of a calibrated orifice and a steam flow meter. A recording steam pressure gage is also available.

An experiment on "Friction of Drives" includes apparatus consisting of three pulleys of different materials with three different kinds of belts, which make possible nine tests with various combinations.

A motor-driven vacuum pump with a rated capacity of six cubic feet of free air per minute under $29\frac{1}{2}$ inches of mercury vacuum is available for tests.

Included among the measuring instruments are five steam engine indicators, two internal combustion engine indicators, four hand tachometers (centrifugal type) with three speed ranges from

0 to 4000 R.P.M., one tachograph, one tachoscope, one rotoscope for speed and vibration determinations, one recording thermometer, planimeters, revolution counters, thermometers, pressure gages, and a portable stroboscopes.

A small machine shop is used for maintenance work of the laboratory and for thesis work. The machines available are a sixteen-inch motor-driven South Bend engine lathe, two belt-driven engine lathes, a vertical drill press, a small vertical drill, a horizontal milling machine, a shaper, a power hack saw, a motor driven double emery wheel, an arbor press, two nine-inch South Bend Workshop lathes, and an Eisler spot welding machine. There are also an anvil and a small hand forge for forging purposes.

Design and Drafting Rooms

The School possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, and files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straightedge devices which facilitate speed and accuracy in blackboard demonstrations.

Physics Department

The Physics equipment has been carefully selected and is ample for demonstrating physical principles. The following apparatus is available for this purpose:

Motor driven Hyvac pump; mechanical oscillator; elasticity apparatus; Jolly balance; barometers; pulleys; specific gravity bottles; torsion balance; eight-foot slide rule; wave apparatus; spherometers; organ pipes; tuning forks; Hartl optical disk; arc illuminator; projection lantern; refraction apparatus; metronome; lenses; calorimeters; hydrometers; thermometers; burners; apparatus for measuring latent heat, specific heat, expansion and mechanical equivalent of heat; optical bench and supplies; diffraction grating; spectrosopes; rheostats; galvanometers; magnets; electrostatic apparatus; electroscope; Wimshurst machine; induction coil; ammeters; voltmeters; resistance boxes; condensers; wheatstone bridges; thermocouples; demonstration table equipped with water, compressed air, exhaust hood, 110 volts D.C., 110 volts A.C., and 220 volts A.C.

List of Individual Subjects in All Curricula

<i>Subject</i>	<i>Day</i>	<i>Time</i>	<i>Fee</i>
1. Advanced Mathematics	Monday	7-9	\$40.00
2. Aeronautical Laboratory I (2)	Wednesday	7-9	20.00
3. Aeronautical Laboratory II	Monday	7-9	40.00* †
4. Air Conditioning Laboratory	Monday	7-9	40.00*
5. Airplane Design	Thursday	7-9	40.00†
6. Airplane Engine Design (2)	Friday	7-9	20.00
7. Airplane Engine Design, Advanced	Friday	7-9	40.00†
8. Applied Mechanics	Thursday	7-9	40.00
9. Architectural Design	Friday	7-9	40.00
10. Architectural Design, Advanced	Friday	7-9	40.00
11. Architectural Drawing	Friday	7-9:30	40.00
12. Business and Industrial Management	Wednesday	7-9	40.00
13. Chemistry, Analytical Laboratory	Friday	7-11	60.00
14. Chemistry, Analytical Lectures	Wednesday	7-9	40.00*
15. Chemistry, Industrial Laboratory	Monday	7-11	60.00*
16. Chemistry, Industrial Lectures	Tuesday	7-9	40.00
17. Chemistry, Inorganic Laboratory	Thursday	7-11	60.00*
18. Chemistry, Inorganic Lectures	Tuesday	7-9	40.00
19. Chemistry, Organic Laboratory	Friday	7-11	60.00*
20. Chemistry, Organic Lectures	Thursday	7-9	40.00
21. Concrete (1)	Monday	7-9	20.00
22. Concrete Design (2)	Monday	7-9	20.00
23. Electricity I	Tuesday	7-9	40.00
24. Electricity II	Tuesday	7-9	40.00
25. Electricity III	Monday	7-9	40.00
26. Electrical Laboratory I	Friday	7-9:30	40.00*
27. Electrical Laboratory II	Friday	7-9:30	40.00* †
28. Electrical Laboratory III	Friday	7-9:30	40.00*
29. Engineering Drawing	Wednesday	7-9:30	40.00
30. Engineering Laboratory I	Monday	7-9	40.00*
31. Engineering Laboratory II	Wednesday	7-9	40.00*
32. Engineering Mathematics	Monday	7-9:30	40.00
33. Engineering Structures	Thursday	7-9	40.00
34. Heat Engineering I (1)	Wednesday	7-9	20.00
35. Heat Engineering II (2)	Wednesday	7-9	20.00
36. Heating and Air Conditioning Design	Thursday	7-9	40.00
37. Highway Engineering	Friday	7-9	40.00
38. Hydraulics (2)	Tuesday	7-9	20.00
39. Machine Design	Friday	7-9	40.00
40. Machine Drawing	Tuesday	7-9:30	40.00
41. Materials of Construction and Foundations (1)	Tuesday	7-9	20.00
42. Mechanism (1)	Friday	7-9	20.00
43. Physics	Thursday	7-9:30	40.00
44. Principles of Air Conditioning (2)	Thursday	7-9	20.00†
45. Strength of Materials	Monday	7-9	40.00
46. Structural Design	Friday	7-9	40.00
47. Structural Design, Advanced	Friday	7-9	40.00
48. Structural Drawing	Friday	7-9:30	40.00
49. Sub-Freshman Mathematics	Monday and Thursday	7-10	80.00
50. Surveying	Friday	7-9:30	40.00

* Plus laboratory fee (See page 29).

† Not offered in 1940-1941.

(1) Signifies First Semester Course

(2) Signifies Second Semester Course

All other courses are two semesters in length.

Description of Courses

THE LINCOLN TECHNICAL INSTITUTE reserves the right to advance requirements regarding admission, to change the content and the arrangement of courses, the requirements for graduation, tuition fees, and other regulations affecting the student body. Such regulations will affect old and new students.

1. Advanced Mathematics. (Prerequisite, Engineering Mathematics)

In the first part of this course instruction is given by lectures and recitations in the following subjects: plotting of functions, interpolation, the straight line, the conic sections, curves represented by various equations of common occurrence in engineering, graphic solution of equations, determination of laws from the data of experiments, simplification of formulas. The plotting and analysis of charts in order to determine empirical formulas is an important part of the course.

The latter part of this course is devoted to lectures and recitations in the following subjects: rate of change, differentiation, maximum and minimum, integration, definite integrals, with application to the determination of area, volume, center of gravity, and moment of inertia. Problems are assigned to illustrate the use of all formulas studied in class.

2. Aeronautical Laboratory I (2)

This course consists of preliminary experiments on calibration of various types of fluid flow instruments, laboratory exercises on barometric altimeters, rate of climb meters, recording thermometers, and humidity instruments.

A Pratt and Whitney Wasp engine is dismantled and reassembled in order to gain a knowledge of the construction and principles of mechanisms involved in its operation. Students supplement the laboratory work with library research.

Preliminary experiments on the wind tunnel are performed.

3. Aeronautical Laboratory II

Among the topics covered in this course are: the flow of an ideal fluid, development of the wing theory, properties of airfoils, engine and propeller characteristics, performance calculation, boundary layer and its effects upon the airplane and reynolds number.

The classroom work is supplemented by laboratory exercises in which the wind tunnel and fluid flow analyzer are utilized.

4. Air Conditioning Laboratory.

This course consists of a series of tests on various types of air conditioning and heating apparatus. Among the pieces of apparatus tested are the following: air blower; unit heater; Carrier air conditioner, provided for humidification or dehumidification; hot air furnace equipped with oil burner, humidifier, blower, and air filters; and also automatic controls and a special insulated constant temperature room for the study of problems in heating and air conditioning.

Experiments are made on various types of refrigeration and cooling apparatus. The refrigeration equipment consists of compression and absorption types and includes small commercial and domestic units. A constant temperature room is used in testing the units. Insulation tests are also included in this course.

5. *Airplane Design.*

The object of this course is to acquaint the student with the methods of practical airplane design as prescribed by the Civil Aeronautics Authority. The student will begin with the specifications of an airplane and complete the following phases of the design: (1) balance diagram, (2) weight estimate and balance table, (3) three view drawing, (4) estimate performance, (5) calculate stability, (6) stress analysis of the structure.

A knowledge of elementary aerodynamics and elementary airplane structures are prerequisites of this course.

6. *Airplane Engine Design (2).*

This course covers the basic operating characteristics and design of airplane engines. Attention is directed to fundamental calculations and principles of similitude. Each student prepares a design of an important part of some particular type of engine.

7. *Airplane Engine Design, Advanced.*

This is a continuation of Course 6 involving the thermodynamic principles of operating. Also, air capacity, combustion, detonation, mixture requirements, ignition, lubrication and working stresses.

8. *Applied Mechanics. (Prerequisite, Physics)*

A course of lectures and recitations comprising a study of the general methods and application of statics to structures in equilibrium, including collinear, concurrent, parallel, and nonconcurrent force systems in a plane and in space; centroids and moment of inertia. Considerable time is devoted to tension and compression in frames, the computation of the reactions, the method of joints, and the manner of distinguishing members containing bending stresses. Vector diagrams are drawn to show the principles of graphical methods. Problems are used and assigned continuously to illustrate the underlying facts of the subject.

9. *Architectural Design. (Prerequisite, Architectural Drawing)*

This course is designed to familiarize the student with the Orders of Architecture, that he may learn their proportions and characteristics. During the second semester the student will move towards simple problems in design, to be drawn and rendered in wash, or he may elect to study the practical application of architectural moldings and forms in the scale and detail drawings of a house. In connection with this course the instructor will outline a course of reading in Architectural History supplemented with lectures on the subject.

10. *Architectural Design, Advanced. (Prerequisite, Architectural Design)*

The design of various architectural problems of a more elaborate and complicated nature than Architectural Design. Plans, elevations, and sections may be drawn and rendered in wash. Students so wishing may shift the emphasis of their work to a study of advanced working drawings, typical to those given to senior draftsmen in actual practice. The Architectural History readings are continued as in Architectural Design.

11. *Architectural Drawing. (Prerequisite, Engineering Drawing)*

This course deals with the fundamentals of masonry construction. Plans, elevations and sections of such as a small school building are drawn and traced, special emphasis being laid on technique, the better to fit a student for work in an Architect's office. Building materials and their uses are studied, as well as any architectural forms occurring in the problem under consideration.

12. *Business and Industrial Management.*

An introductory survey of the whole field of business and industrial administration with special emphasis upon training the student in the analysis of business and industrial problems. The functions of business and industrial administrators are discussed with particular reference to the control policies and devices of the manager. The course presents the problems of business and industrial administration as an interrelated whole and helps the student to see the lines of study which lead to solution of these problems.

13-14. *Chemistry, Analytical. (Prerequisite, Inorganic Chemistry)*

Qualitative Analysis — Lectures and Laboratory — First Semester.

Lectures and recitations are carefully co-ordinated with laboratory work. Not only is the detection of the common cations and anions considered but also the theoretical principles relating to hydrolysis, solubility product, ionic equilibrium, amphoteric substances, complex formations, oxidation and reduction, correct concentrations, etc. Sequentially related experiments which may be combined into a complete system of analysis are performed. From time to time unknown solutions and substances are given the student, the analysis of which emphasizes the very practical side of the work.

Quantitative Analysis — Lectures and Laboratory — Second Semester.

The major operations of quantitative analysis, such as weighing, measurements of volumes, titration, filtration, ignition, and combustion are considered both from the theoretical and the manipulative aspects.

Typical analyses and common technical methods are discussed critically, and unknown solutions and substances, the analysis of which involves volumetric analysis, including acidimetry and alkalimetry, oxidation and reduction, and precipitation methods, are performed.

Each analysis requires correct calculation as well as careful analytical procedure. For this reason quantitative calculations are studied through the medium of representative problems.

15-16. *Chemistry, Industrial Lectures and Laboratory. (Prerequisite, Inorganic Chemistry, Analytical Chemistry)*

Lectures.

The lecture work in this course is designed to acquaint the student with the technology of the chemical industries. The material is presented in the light of present-day understanding of unit operations and unit processes and thus gives the student an up-to-date survey of the field of the industrial chemist.

In addition to the study of the acid heavy and basic heavy chemicals such as salt, sulfuric acid, nitric acid, soda ash, caustic soda, and chlorine, the course also includes an introduction to the chemical technology of such industries as rubber, paper, dyes, explosives, solvents, petroleum, soap, etc. The course content can be adjusted to meet the needs of the students in the class.

Laboratory.

The laboratory work supplements the lectures and acquaints the student with the plant processes used in the chemical industries.

The experiments are first carried out in test tubes and then on a much larger scale. In carrying out these chemical processes in the laboratory, the student controls the operation through the analysis of the products formed and thus becomes acquainted with the technical methods of analysis used in control laboratories.

This method is extremely valuable to men who are contemplating a career in any of the chemical industries. This is true regardless of the nature of his work, whether it be laboratory, plant, office, or sales work.

17-18. *Chemistry, Inorganic, Lectures and Laboratory.* (Prerequisite, *Elementary Chemistry, Engineering Mathematics*) It is also recommended that students have completed a course in high school Physics.

This course builds on the foundation laid by the student in his previous study of Elementary Chemistry and allied subjects. It aims to develop in the student an understanding of numerous laws, principles, facts of Chemistry, and to provide him with the preparation necessary for successful pursuit of more specialized work to which he may be looking ahead. The course should prove of value to those at present engaged in the field of Chemistry and to those who plan to enter that field. The work of the course embraces general class sessions or "lectures", and separate laboratory periods.

In the lectures, the instruction is accompanied by appropriate demonstration experiments; adequate time is devoted to the solution of numerical problems that illustrate chemical principles and their application; students' difficulties are discussed; quizzes and longer tests are held at the discretion of the instructor.

During laboratory periods, students work out under supervision a variety of experiments involving procedures both of a qualitative and of a quantitative nature which are planned to illustrate important principles or facts; desirable laboratory methods are emphasized; principles and results are discussed. The student is required to make approved records of experiments.

19-20. *Chemistry, Organic, Lectures and Laboratory.* (Prerequisite, *Inorganic Chemistry, Analytical Chemistry*)
Lectures.

In this course the student obtains a thorough foundation in the principles and theories of organic chemistry. These are presented in a manner that emphasizes the relationships existing among the various classes of organic compounds. The practical nature of the subject is stressed by familiarizing the student with the industrial applications of these theories and principles to such industries as: petroleum, rubber, dyes, explosives, drugs, etc.

Laboratory.

The carefully selected preparations serve to give the student concrete evidence of the validity of the theories and principles of organic chemistry. They also help in developing the laboratory technique necessary in such manipulations as fractional distillation, physical and chemical separations, extractions, crystallizations, steam distillations, etc.

The fundamental types of chemical changes considered here are esterification, saponification, sulfonation, nitration, reductions, diazotizations, and condensation.

21. *Concrete.* (Prerequisite, *Applied Mechanics*)

A consideration of the theoretical and practical principles involved in the design of concrete and reinforced concrete structures. The following subjects are thoroughly discussed: the design and capacity of existing single reinforced rectangular beams, double reinforced rectangular beams, and "T" beams; the fundamental principles underlying diagonal tension and bond stress; column design and methods of determining stresses in existing columns; the origin of curves and tables and their uses. Problems involving the above types of sections, first by the transformed area method and later by curves and tables, are done by the students.

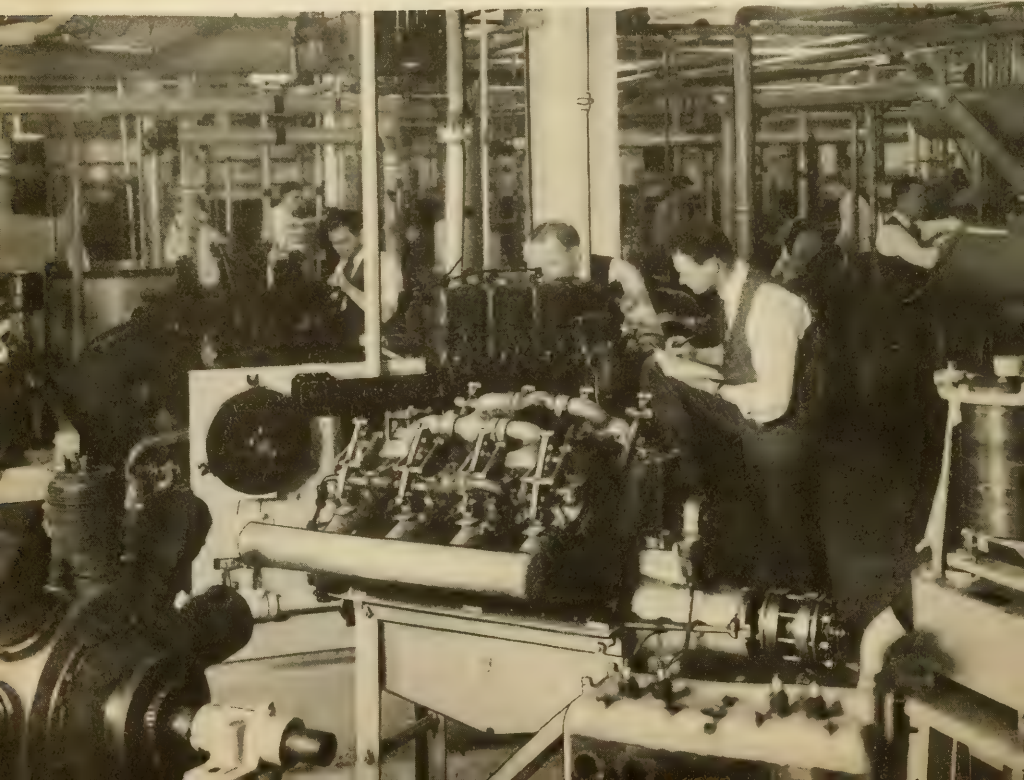
22. *Concrete Design.* (Prerequisite, *Concrete*)

This course will consist of the design of a cantilever retaining wall, retaining wall with counterfortes, a typical bay of a reinforced concrete building, footing design, and a reinforced concrete bridge. The course will also include a detail discussion of the Hardy Cross method of moment distribution, column analogy, and a comparative discussion of stress analysis in rigid frames.



A DRAWING ROOM

MECHANICAL ENGINEERING LABORATORY



23. *Electricity I.*

A course of lectures and problems designed to give the student the necessary concept and understanding of the elements of electricity to enable him to comprehend the courses to follow in direct and alternating current machinery and circuits.

In the second semester lectures and problems covering the characteristics, losses, efficiencies, and operation of direct current machinery.

(This course is coordinated with appropriate laboratory work. Course 26.)

24. *Electricity II.*

A course of lectures and problems dealing with alternating current circuits both single and polyphase involving the use of complex algebra.

In the second semester lectures and problems covering the construction, theory, characteristics and testing of the various types of alternating current machinery.

(This course is coordinated with appropriate laboratory work. Course 27.)

25. *Electricity III.*

A course of lectures and problems dealing with the transmission and distribution of electric power by means of direct and alternating current. A complete study of the application of the various types of electrical machinery to industry.

In the second semester lectures and problems covering the principles, characteristics, and applications of electronic tubes to industrial and commercial processes.

(This course is coordinated with appropriate laboratory work. Course 28.)

26. *Electrical Laboratory I. (Prerequisite, Physics)*

During the first semester this course covers thoroughly by experiment the theory and operation of direct current motors. Particular emphasis is placed upon correct experimental technique and upon the use and care of indicating instruments such as the direct current voltmeter, ammeter, and millivoltmeter with shunts. Typical experiments performed in this half of the course include the measurement of resistance by drop-in-potential method and the load operation curves of the direct current shunt, series, and compound motors.

During the second semester the student does experimental work on the following: Efficiency by Stray Power Method, Operating Characteristics of Shunt and Compound Generators, Series Booster, and Heat Run on a D.C. Generator.

27. *Electrical Laboratory II. (Prerequisite, Electrical Laboratory I)*

The first semester of this course is a continuation of the study of direct current machines. The experiments performed by the student are of an advanced nature and include: Retardation Method of Measuring Losses, Parallel Operation of D.C. Generators, Electrical Supply of Losses, Electrical Separation of Losses, and Direct Current Generator Regulation from No-Load Measurements.

In the second semester the course includes the use of alternating current instruments such as the voltmeter, ammeter, and wattmeter. The experiments begin with a study of series and parallel circuits containing resistance, inductance, and capacitance, the circuit analysis being made by vector diagram and complex calculation. Other experiments include: Transformer Efficiency and Regulation, Transformer Heat Run, Parallel Operation of Single-Phase Transformers, Transformer Efficiency by Opposition Method, and the Constant Current Transformer.

28. *Electrical Laboratory III. (Prerequisite, Electrical Laboratory II)*

The experiments in this course are performed upon three-phase apparatus and include the following: Transformer Connections in Three Phase Circuits; Regulation and Efficiency of Alternators by Load Test, No-Load Test, and A.I.E.E. Methods; V-Curves and Efficiency of a Synchronous Motor; Load Test on the Six-Phase Synchronous Converter; Load Test on Fynn Wechsel Motor, and Induction Motor Speed-Torque Curves.

29. *Engineering Drawing.*

This course is planned to meet the requirements of a class composed of students who have had no previous instruction in drafting, and also for those who may have had one or two years' work in preparatory schools.

Instruction is given in the testing, use and care of the instruments and drawing supplies, and about thirty drawing plates are made. The topics studied in these plates include: technique practice, lettering, geometric construction, orthographic projections, auxiliary views, revolution of objects, isometric, cavalier, cabinet and perspective projection, intersections, sections, helix and application, screw threads, dimensioning and inking. A number of practical problems, pertaining to the professional courses to be taken, in which drawing is the application, are also given.

These give the student a thorough training in the fundamental principles of mechanical drawing, so that he may easily do the drafting required in his professional course. A short lecture will be given at the opening of each class based on the work at hand, and individual instruction is given during the remainder of the class period.

For those who have had some experience in Mechanical Drawing, a special course is devised which will take care of individual needs and offers students more advanced work.

30. *Engineering Laboratory I. (Prerequisite, Heat Engineering I)*

This course includes a series of experiments upon various kinds of equipment used in modern power plants to demonstrate under actual conditions the principles developed in the Heat Engineering course. In addition, the work of course 35 is supplemented by additional theory and by experiments upon various kinds of equipment. A complete report of each experiment is made.

31. *Engineering Laboratory II*

This is a continuation of course 30 and involves additional experiments which include calibration of instruments; performance of hydraulic equipment, steam equipment as used in power plants, heating units for the household, air conditioning apparatus, and internal combustion engine.

Advantages and disadvantages of the various equipment are studied and different units are compared.

32. *Engineering Mathematics. (Prerequisite. First courses in Algebra and Plane Geometry)*

Although the primary purpose of this course is to lay a thorough ground work for Analytical Geometry, Calculus, and Applied Mechanics, it should be understood that the course is a complete unit in itself, enabling the student to handle a considerable proportion of the practical problems arising in engineering practice.

For the sake of a common ground work, a rapid review of the fundamental concepts, processes, theorems, and axioms, is given followed by factoring to quadratics, rectangular coordinates and graphs, radical equations, theory of equations, the binomial theorem and logarithms.

Approximately one-third of the course is devoted to the study of Plane Trigonometry and some of its practical applications. This part includes the solution of right triangles; solution of oblique triangles by the law of sines, cosines, tangents and half angle formulas, radians, trigonometric ratios, identities, and equation.

Instruction, including problems and exercises, is also given in the theory and use of the slide rule.

33. *Engineering Structures. (Prerequisite, Strength of Materials)*

First term is an introductory course covering outer forces, reactions, moments and shears for fixed and moving loads. The use of influence lines, the stress analysis of composite beams, torsion in rivets, three-moment equations, design of a deck plate girder bridge, and through plate girder bridge. Each student must design a deck plate girder bridge.

Second term deals with the computation of stresses of various trusses by the moving up load method and equivalent uniform live load method. Stresses in portals; slope deflection method and Hardy Cross method stress distribution in rigid frames.

34. *Heat Engineering I. (Prerequisite, Physics)*

The fundamentals of thermodynamics are discussed in this course and include the general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including use of tables and charts; and the general equations for the flow of fluids. Particular emphasis is given to the properties of steam, the use of the steam tables, and the Mollier diagram.

The course also embraces a study of fuels and combustion of fuels as applied to steam boilers.

The purpose of the course is to familiarize the student with the theory of heat as applied to prime movers.

35. *Heat Engineering II. (Prerequisite, Heat Engineering I)*

The applications of the principles taken up in Heat Engineering I are included in this course. Descriptions of many different kinds of apparatus used in the steam power plant such as engines, turbines, and auxiliary equipment, including pumps, condensers, heaters, fans, etc., comprise the major part of the course. A large number of problems related to the apparatus discussed are solved. In addition to the above, such items as draft, chimneys, coal and ash handling equipment, piping and valves, and typical power plants are studied. In addition, steam apparatus, air compressors, and internal combustion engines are discussed.

36. *Heating and Air Conditioning Design.*

The study of the principles and design of heating, ventilating, and air conditioning systems. Class problems, complete from initial survey and calculation of heating or cooling load to final arrangement of piping and ducts, include: (1) winter heating, and humidification by steam, hot water, and warm air systems; (2) summer cooling and dehumidification by mechanical refrigeration, well water, and chemical drying agents. Equipment, such as furnaces, burners, stokers, fans, controls, etc., will be discussed. The fundamentals of refrigeration will be studied in connection with summer air conditioning.

37. *Highway Engineering.*

An outline of the principles governing the finance of highway projects and assessments of street construction. Thorough discussion of the survey for a highway project. Lectures on the fundamental principles of highway design; namely, roadway, alignment, safety devices and accessories. Various present-day road surfaces are discussed. A study of the fundamental principles of soil mechanics as it relates to Highway design.

38. *Hydraulics. (Prerequisite, Applied Mechanics)*

This course is a study of the principles of both hydrostatics and hydrodynamics. The subjects considered are: the pressure on submerged areas together with their points of application; the laws governing the flow of fluids through orifices, short tubes, nozzles, wiers, pipe lines, and open channels.

39. *Machine Design (Prerequisite, Mechanism)*

This course applies to machines the principles of which were presented in Course 42. Typical problems presented for design are the triplex power pump, power shearing machine, and a twenty ton hydraulic press.

Minimum sizes of the various parts are calculated and an assembly of the complete machine is drawn and traced. All calculations are carefully presented in notebook form.

Also, numerous miscellaneous small problems are taken up.

40. *Machine Drawing. (Prerequisite, Engineering Drawing)*

This course is taught on a problem basis with the student working out problems under the supervision of the instructor. The lectures and leading assignments correlate with the class problems. Short quizzes are given to cover the reading assignments. The principles covered include preliminary machine sketches, detailing from machines and from assembly drawings, dimensioning with reference to basic size system, sectioning and the making of assembly drawings from details, and also problems in cam construction.

The lectures and assigned readings take up such topics as fastenings, machine elements, methods of manufacture, jigs and fixtures, methods of reproducing drawings and those drawing techniques that are to be applied to the particular problem being done.

41. *Materials of Construction and Foundations.*

(a) *Materials of Construction.* A detailed study is made of the methods of manufacturing, properties, and uses of materials used in engineering work, such as iron, steel, lime, cement, concrete, brick, wood, and stone.

A study is also made of the methods of testing and the strength of various materials used by the engineer.

(b) *Foundations.* This course is designed to give the student a clear, concise survey of the properties and characteristics of the common types of foundation structures in use. The subjects treated are timber and concrete piles; sheet piles of wood, steel, and concrete; cofferdams; caissons of the pneumatic box and open types; open wells, bridge piers and abutments.

Each student must write a report on simple cements, complex cements, concrete, steel, timber, piles, cofferdams, and caissons.

42. *Mechanism (1). (Prerequisite, Machine Drawing)*

The object of the first part of this course is to acquaint the student with the principles of mechanism which are met in practice and in machine design. The topics considered are belting, pulley, and gear train calculations, both simple and epicyclic, cam design and theoretical design of gear-tooth shapes. The instant center calculations and velocity diagram plots or common linkages are studied.

43. *Physics.*

A course covering the fundamental principles of mechanics, heat, light, sound and electricity. The lectures are illustrated both by demonstration with apparatus and by stereopticon. Each lecture period is supplemented with a problem period in which the student learns the practical application of the laws of physics. Some of the topics taken up in mechanics are equilibrium, center of gravity, accelerated motion, work, energy, machines, and fluid pressure. The part of the course on heat includes: expansion of solids, liquids, and gases, calorimetry and mechanical equivalent of heat. The course also covers the fundamental properties of light and sound, and the elements of electricity. Practical problems covering each phase of the work are assigned to fix in the mind of the student the principles taken up in the lecture period.

44. *Principles of Air Conditioning (2)*

This course covers the fundamental principles involved in heating and air conditioning. This includes the study of the properties of air, the psychrometric charts and tables, methods of measuring temperature, humidity and air velocities, conductivity of various building materials, properties of different types of insulation and methods of figuring heat losses for all types of building.

45. *Strength of Materials. (Prerequisite, Applied Mechanics)*

This course comprises the study of the stresses and strains in bodies subjected to tension, compression, and shearing; common theory of beams with thorough description of the distribution of stresses, shearing forces, and bending moments; and deflection of beams.

A study is made of the strength of shafting and springs; combined stresses in beams subjected to tension, compression, and bending; also strength of riveted joints, columns, and thin hollow cylinders, and brief consideration of strains and the relation of the stresses on different planes in a body.

46. *Structural Design. (Prerequisite, Structural Drawing)*

This course consists of a study of the design of such structural units as steel beams, girders, columns, trusses, riveted connections and steel frames as a whole. Particular attention is given to the practical phase of construction and their relation to design. The design of structural timber is also studied. In the first half of the year the student is given many problems which he works out at home and in class and the last half of the year is usually devoted to the design and detailing of some larger, more complicated structures or portions of structures.

47. *Structural Design, Advanced.*

This is a continuation of Course 46 in Structural Design and consists largely of class problems of a more complicated nature. In recent years such structures as elevated water tanks, mill building frames, portions of an office building frames and highway bridges have been designed in class. Considerable stress is laid on the practical phases of construction as well as design requirements.

48. *Structural Drawing. (Prerequisite, Engineering Drawing)*

The course in Structural Drawing consists of making shop drawings of the various members of modern steel frames. After making drawings of structural sections and standard connections, the student is given data from which he makes framing plans and shop details. The problems usually covered are: portions of a steel frame building, a bridge girder, and a roof truss.

49. *Sub-Freshman Mathematics.*

The first part of this course is devoted to a thorough study of Algebra and Plane Geometry. It then proceeds to more advanced work embraced by the course in Engineering Mathematics as described in Course 32.

50. *Surveying. (Prerequisite, Engineering Mathematics)*

(a) A course of lectures, which treats the basic principles such as: taping, compass, theory and use of the transit as applied to both random and closed traverses, differential leveling, profile leveling, and double rodged leveling. The D.M.D. and rectangular coordinate methods (of computing, plotting and running traverses) are stressed and especially as they may apply to such work, or procedure as outlined by the Massachusetts Land Court.

(b) A continuation of Surveying (a), consisting of lectures and problems on Stadia surveying, the theory and use of the plane table, plane, triangulation simple curves (railroad curves and circular arcs), vertical curves, compound curves, and elementary earthwork problems.

THE LINCOLN SCHOOLS

EVENING SESSIONS

LINCOLN TECHNICAL INSTITUTE

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Courses leading to the Title of Associate in Engineering are offered in the following major fields:

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AIR CONDITIONING ENGINEERING	ELECTRICAL ENGINEERING
ARCHITECTURAL ENGINEERING	MECHANICAL ENGINEERING
CHEMISTRY	STRUCTURAL ENGINEERING

Degree Programs

A six-year program conducted in conjunction with Northeastern University School of Business is available which leads to the degree of B.B.A. in Engineering and Management awarded by Northeastern University.

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For those who do not wish to take one of the regular programs, special programs consisting of one or more courses can be arranged to meet individual needs.

LINCOLN PREPARATORY SCHOOL

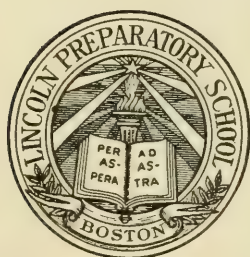
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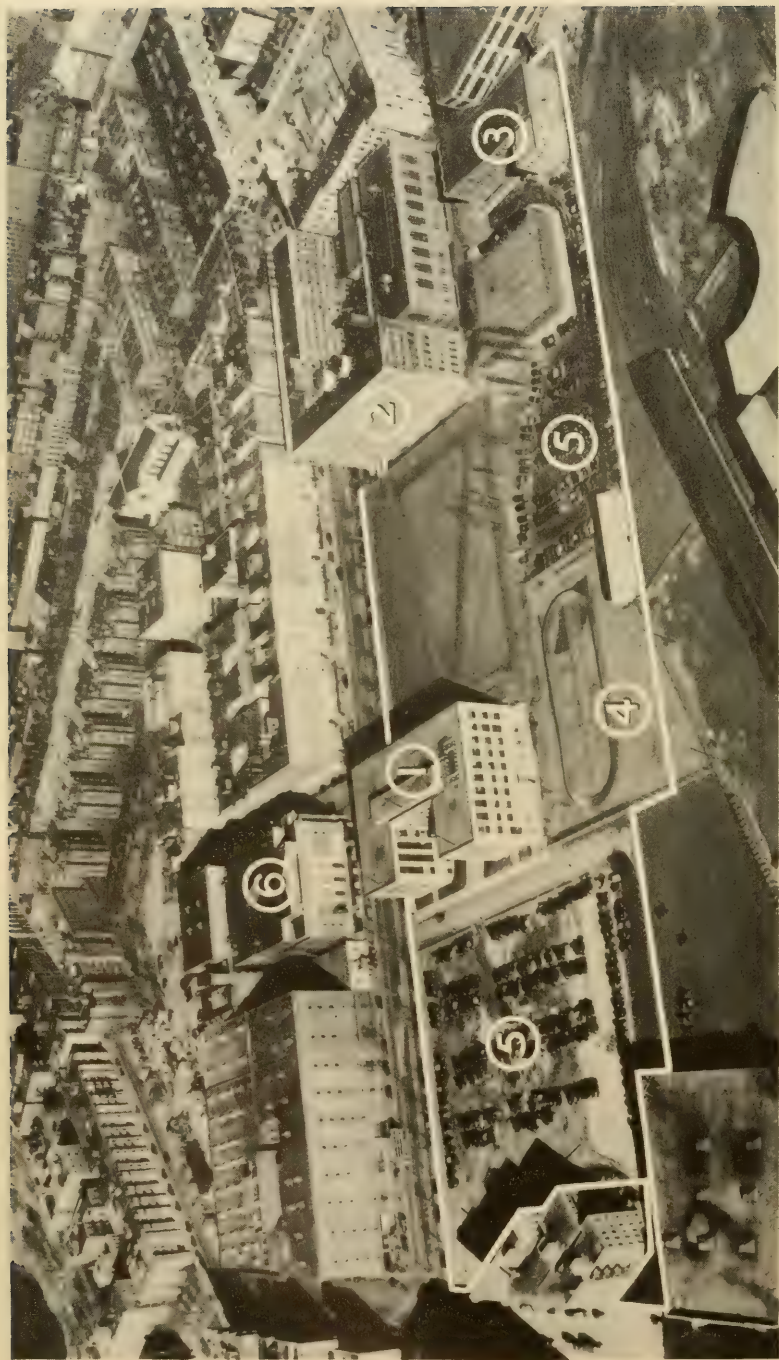
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EFFICIENT PREPARATION FOR COLLEGE



NORTHEASTERN UNIVERSITY, HUNTINGTON AVENUE SITE

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1. West Building
2. East Building
3. South Building
4. Outdoor Gymnasium
5. University Parking Areas
6. Boston Opera House

CALENDAR

Summer Term, June, 1940–September, 1940

May 20–June 3	Registration period.
June 3	Classes begin.
July 4	Legal holiday. No classes.
September 2	Legal holiday. No classes.
September 9–13	Final examinations.

School Year, September, 1940–May, 1941

1940

September 9–23	Registration period.
September 23	Classes begin.
November 11	Legal holiday. No classes.
November 28	Thanksgiving Day. No classes.
December 20	Last session before Christmas recess.

1941

January 3	Classes resume.
May 12–16	Final examinations.

Winter Term, January, 1941–May, 1941

January 2–13	Registration period.
January 13	Classes begin.
May 26–29	Final examinations.

OFFICE HOURS

August 12, 1940–June 14, 1941

Week days, except Saturday	9 a.m. till 9 p.m.
Saturday	9 a.m. till 1 p.m.

June 16, 1941–August 16, 1941

Monday, Wednesday, and Thursday	9 a.m. till 4 p.m.
Tuesday and Friday	9 a.m. till 4 p.m.; 6 p.m. till 8 p.m.
Saturday	9 a.m. till 12 noon

INTERVIEWS

Prospective students, or those desiring advice or guidance with regard to any part of the school work or curricula, are offered without obligation personal interviews with the Principal or his assistants. No inquirer should hesitate to ask for an appointment as, in the long run, time is saved during the school year by having the whole educational problem discussed before the opening of the School.

BOARD OF TRUSTEES

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Chairman

FRANK LINCOLN RICHARDSON
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CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D.
President

EVERETT AVERY CHURCHILL, A.B., Ed.D.
Vice-President

GALEN DAVID LIGHT, A.B.
Treasurer

JAMES WALLACE LEES, A.M.
Headmaster

JOHN KENNETH STEVENSON, B.C.S.
Assistant to the Vice-President

WILLIAM GREENE WILKINSON, A.B., Ed.M.
Assistant Headmaster

FACULTY

VICTOR MANUEL AUBERT

Appointed 1939

A.B. National College of Costa Rica, Central America, 1934; A.M. Boston College, 1940; Instructor in Spanish, Boston College; Professor of Spanish, Berlitz School of Languages; Private Tutor in Romance Languages.

Spanish

WALTER ALFRED BALDWIN

Appointed 1910

A.B. Ohio Wesleyan University, 1906; graduate study University of Chicago and Harvard University; Head, Department of Mathematics, Chillicothe High School, Ohio, 1906-08; Head, Department of Mathematics, Mansfield High School, Ohio, 1908-10; Head, Science Department, Huntington School for Boys, Boston, 1912-14; Instructor in Physics and Chemistry, Lincoln Preparatory School, 1910-.

Physics and Chemistry

WILLIAM TILDEN BENTLEY

Appointed 1916

A.B. Harvard University, 1907; Submaster, Malden High School, 1914-24; Belmont School, 1924-29; Principal, Charles A. Daniels School, 1929-.

English

CHARLES LEE CHEETHAM

Appointed 1928

A.B. Bates College, 1911; A.M. Columbia University, 1927; Instructor in Mathematics, Portsmouth High School, New Hampshire, 1912-14; Submaster, Westerly High School, Rhode Island, 1915-17; Instructor in Mathematics and Science, Tower Hill School, Wilmington, Delaware, 1919-23; Instructor in Mathematics and Physics, Roger Ascham School, White Plains, New York, 1923-27; Instructor in Science, Mathematics and Physics, Public Latin School, Boston, 1928-.

Physics

PRESTON HARVEY

Appointed 1933

A.B. Bowdoin College, 1928; Instructor in Latin and History, Portland Country Day School, 1928-31; Head of Latin Department, Huntington School, 1932-.

Latin and History

PERCY EDWARD JONES

Appointed 1923

Sloyd Training School, 1920; B.S. Boston University, 1930; Instructor in Mathematics and Drawing, Huntington School for Boys, 1919-.

Mathematics

ALFRED BLANCHARD KERSHAW

Appointed 1928

A.B. Amherst, 1904; A.M. Amherst, 1907; Instructor, The Allen School, West Newton, 1908-09; Instructor in English, Brockton High School, 1909-11; Submaster, English High School, Boston, 1911-.

English

STANLEY D. MIROYIANNIS**Appointed 1936**

B.S. Northwest College, 1927; A.M. Massachusetts State College, 1928; Ph.D. Boston University, 1936; Instructor in Biology, Boston University, 1933-36; Head of Department of Biology, Northeastern University, 1936-.

*Biology***JAMES HARRIS MORSS****Appointed 1927**

A.B. Boston University, 1903; Ed.M. Harvard University, 1927; Instructor in Huntington School for Boys, Boston, 1915-.

*English***THEODORE WOODS NOON****Appointed 1922**

A.B. Yale College, 1896; M.A. Yale University, 1898; Exhibitioner, Emmanuel College, University of Cambridge, England, 1906-07; Master, Lawrenceville School, Lawrenceville, New Jersey, 1908-18; B.D. University of Chicago, 1913; S.T.M. Boston University, 1922; Ed.M. Harvard University, 1924; Instructor in Lincoln Preparatory School and Huntington School for Boys, Boston, 1922-.

*Latin and Ancient History***DEANE STANFIELD PEACOCK****Appointed 1931**

A.B. Bowdoin College, 1917; A.M. Bates College, 1927; Ed.M. Harvard University, 1932; Principal, Oakland High School, Maine, 1919-24; Principal, Freeport High School, Maine, 1924-31; Junior Master, English High School, Boston, 1932-.

*English***FRED PARKER HAMILTON PIKE****Appointed 1921**

A.B. Colby, 1898; graduate study Johns Hopkins University, 1903-05; Instructor in Modern Languages in private preparatory schools, 1899-1908; Instructor in French, Public Latin School, Boston, 1909-.

*French and German***CHARLES FREEMAN SEAVENS****Appointed 1914**

Harvard University, 1915-17; Instructor in Mathematics and Drawing, Huntington School for Boys, Boston, 1914-19; Instructor, Everett High School, 1925-.

*Mathematics and Mechanical Drawing***ALBERT SHEPARD****Appointed 1938**

A.B. Harvard University, 1913; A.M. Harvard University, 1914; Ph.D. Harvard University, 1916; University of Chile, 1916-17; Akron University, 1917-18; Norwich University, 1918-20; Albany Boys' Academy, 1920-22; University of North Carolina, 1922-26; Belmont Hill School, 1926-35; Tilton School, 1936-37; Brookline High School, 1937-.

*French***ALFRED LORING SKINNER****Appointed 1927**

A.B. Harvard University, 1919; Instructor in Mathematics, North Andover, Massachusetts, 1919-22; Instructor in Mathematics, Huntington School for Boys, Boston, 1922-.

Mathematics

HAROLD F. STEVENS

Appointed 1939

B.S. Tufts College, 1911; Instructor in Mathematics, Hyde Park High School, 1911-.

*Mathematics***HERBERT LEWIS SWAN**

Appointed 1939

Ph.B. Brown University, 1928; Graduate study, Harvard Graduate School of Education; Head, English Department, Burr and Burton Seminary, Manchester, Vermont, 1931-32; Head, English Department, Admiral Billard Academy, New London, Connecticut, 1936-38; Leader in Cambridge and Boston Centers of Adult Education, 1939-40.

*English***JOHN MOORE TROUT, JR.**

Appointed 1936

A.B. Princeton University, 1928; Ed.M. Harvard University, 1932; Instructor at Huntington School for Boys, 1928-.

*English***DANIEL P. A. WILLARD**

Appointed 1925

B.S. University of New Hampshire, 1913; Principal, Edgartown High School, Massachusetts, 1913-14; Submaster, Braintree High School, Massachusetts, 1915-16; Instructor in Social Sciences Newton High School, Massachusetts, 1916-.

Social Sciences

EDNA M. EDISON, Secretary**HELEN E. HILDRETH, Bookkeeper****HAWTHORNE P. SUMMERS, Recorder**

THE LINCOLN SCHOOLS

The Lincoln Schools, conducted by and affiliated with Northeastern University, include the Lincoln Technical Institute and the Lincoln Preparatory School. These Schools offer the non-degree-granting work conducted by Northeastern University. In the Lincoln Technical Institute the work, however, carries credit towards the title of Associate in Engineering and is acceptable also towards the degree of B.B.A. in Engineering and Management offered by Northeastern University School of Business.

All classes in the Lincoln Schools are held in the evening and are especially designed to meet the needs of those who are employed during the day.

The first of the Lincoln Schools to be established was the Lincoln Preparatory School, known for many years as the Northeastern Preparatory School. This School had its real beginning in 1897 in the single courses offered in History, Science, and other subjects of a cultural nature, and in certain trade courses intended to benefit men engaged in various occupations.

Gradually the trade courses were discontinued and the remaining subjects were welded into a regular high school program, upon the completion of which a standard high school diploma was awarded.

The primary purpose of the School has been effective preparation of students for college entrance. For this reason constant attention has been paid through the years to the maintenance and improvement of standards.

In 1925 women were admitted to classes on the same basis as men. Since 1924 the School has been accredited by the New England College Entrance Certificate Board, a marked distinction in the case of an evening school, and an expression of confidence that day school standards are maintained. The School today offers curricula in the general, scientific, and classical fields. The enrollment has increased from fewer than fifty students to almost four hundred, of whom one-fifth are women. The faculty has been increased until it now numbers from twenty to twenty-five men of wide experience and training, drawn from the leading day preparatory and high schools of Metropolitan Boston.

Next in point of view of time was the Lincoln Technical Institute, which had its origin in the Evening Polytechnic School.

The latter received its title in 1901, when the work of various technical departments, such as the Department of Steam Engineering, the Department of Art, the Automotive School and the Department of Naval Architecture, were grouped together into curricula. By 1904 we find the School offering definite curricula, generally of three years' duration, in Architecture, Chemistry, Marine Engineering, Structural Engineering, Steam Engineering, along with courses in Art, Navigation, Surveying, Seamanship, and other related fields. In 1925 the title Lincoln Institute was given to the Northeastern Evening Polytechnic School. At this time the Lincoln Institute remodeled, lengthened, and consequently improved the former courses, offering four-year curricula in Architecture, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering and Structural Engineering.

Since then, additional curricula have been added; namely, Aeronautical Engineering and Air Conditioning Engineering as options in Mechanical Engineering.

In addition, provision was made so that students need not pursue a complete curriculum but could elect individual courses related to their present occupations, the only prerequisite of entry being ability to pursue the course with profit to themselves. At the present time there are five hundred students receiving instruction in the Lincoln Technical Institute in the various branches of engineering.

Since 1936 the curricular courses of the Institute have been credited by Northeastern University School of Business towards the Degree of Bachelor of Business Administration in Engineering and Management offered in that school.

Effective 1939 the Executive Council of Northeastern University authorized the Lincoln Technical Institute to award the Title of Associate in Engineering to those who satisfactorily complete the prescribed curriculum.

The Officers of Administration are constantly alert to changing conditions and from time to time will modify existing courses to meet new needs and develop new courses so that real educational opportunities will be available to employed men and women at convenient evening hours. In particular they are sincerely interested in the problems of each student and are available for vocational and educational guidance.

Through the Lincoln Schools many men and women have

been able to solve their problems and to secure that education which has enabled them to succeed in the work for which they are adapted by ability and interest. Without the facilities of the Lincoln Schools many of these alumni would still be occupying minor positions with little opportunity for advancement on account of lack of training.

THE INTEREST IN EDUCATION

The following items show the growth of our school population and the increasing interest in education at all age levels. They are the most recent figures available and are issued by the Office of Education, United States Department of Education.

Approximately one-fourth of the total population of the country is enrolled in regular full-time day schools. In addition a large number are studying at night, in the summer, by correspondence, or in private trade or vocational schools not reporting to the Office of Education. The number reported for 1935-1936 was 30,587,477 in full-time day schools. The Bureau of Census estimated the total population as 128,024,000 persons on January 1, 1936.

The following figures show the growth in secondary school enrollment:

1920.....	2,494,676
1930.....	4,799,867
1932.....	5,592,872
1934.....	6,090,749
*1936.....	6,424,968

*Latest figures available

Below is given a table showing the numbers of high school and college graduates.

<i>Year</i>	<i>Graduates</i>	
	<i>High School</i>	<i>College</i>
1925.....	596,655	111,161
1930.....	655,223	122,484
1932.....	833,252	138,063
1934.....	914,853	136,156
*1936.....	1,015,345	143,125

*Latest figures available

More than one million students are graduating from high school each year. In Massachusetts 29.3 per cent of total school population is in high school.

THE NEED FOR EDUCATION

These figures surely indicate that in the future, because of the high general level of educational qualifications, competition for jobs will be keen. They further indicate that there is little real hope for advancement for the man who falls behind in the race by neglecting to secure adequate education and training. As business conditions improve, there will be increased opportunities for employment, but there is the danger that those who trust in luck will be misled by such improvement in business and will hope and believe they will be carried back to employment and perhaps prosperity without any effort on their part. Perhaps they may, although that is unlikely. If so, they will be the first to suffer subsequently. But there will be thousands who will now take the opportunity of making sure, in so far as is possible, that they will meet subsequent changes in the industrial world much better prepared than they are now.

Industrial concerns, more than ever before, demand trained men and women. Those who are now employed know that even to hold their present positions they must increase their ability or someone with greater ability will come along and deprive them of their jobs. How much more necessary is it to increase one's ability and one's value to his employer if he wishes to get ahead. Even though additional training should demand pronounced sacrifices, it should nevertheless be undertaken. The first opportunities will go to those who will be already trained when business improves.

Very soon the competition of brains will be keener than ever before. It is not only necessary that a man provide himself with such adequate training that an employer will desire to retain him, but he should also, while comfortably employed, endeavor to prepare himself for advancement, either with his present employer in a more responsible and profitable position or with another employer who needs his services and is prepared to pay for them. The depression has shown us that security of employment is the greatest single need that each of us has. Employment can be made increasingly secure only by personal effort in securing adequate training.

THE LINCOLN PREPARATORY SCHOOL

CHARACTERISTICS OF THE SCHOOL

Before a prospective student makes a final decision regarding the evening school he wishes to enter, he should ascertain some of the characteristics of a good preparatory school. Following are the outstanding characteristics of the Lincoln Preparatory School:

1. It is non-proprietary, and organized exclusively for service to students, the income being devoted to that end, rather than being organized for profit.
2. Adequate fees are charged to insure the employment of the best teachers attainable and to provide constant improvement in the educational processes.
3. Scholarship funds are available to assist deserving and needy students who cannot meet the fees that must be charged if high standards are to be maintained.
4. It has a trained and experienced faculty; that is, the men who form its staff are teachers of experience, familiar with college entrance requirements, with long practice in dealing with the individual problems of students.
5. All work is conducted on a regular classroom basis to meet the approval of higher institutions and the New England College Entrance Certificate Board requirements.
6. The size of the classes is such as to permit reasonably individualized attention.
7. The courses are conducted so that the content of each course is thoroughly covered in order that it may be of the maximum value to the student, not only in the interests of his personal growth, but as preparation for further study.
8. The student body is adequately prepared for the type of instruction which is to be imparted in the classroom. The level of achievement is not lowered by the admission of unfit students.
9. High quality of performance is maintained in the classroom, and students bring to bear on their studies an interest and enthusiasm which permit all work to be conducted on a high, qualitative plane. Classes are not conducted to be a vehicle by which students may obtain credit by easy and slipshod methods. Credit is awarded only when the quality of the student's work meets the definition of Requirements of the College

Entrance Examination Board and the New England College Entrance Certificate Board.

10. Its graduates have proved successful in college, in the professions, and in business life.
11. There are adequate laboratories, classrooms, and other facilities.
12. The administrative organization affords opportunities for skilled educational and vocational guidance.

AIMS OF THE SCHOOL

The aims of the Lincoln Preparatory School may be classified as follows:

1. The offering of educational opportunities to men and women by methods of instruction carefully adapted to the needs of adult students.
2. The providing of this instruction at convenient evening hours, so that the student need not leave his or her present employment while obtaining an education.
3. The conducting of the school work on such a high qualitative plane that those students who wish to prepare for college may be adequately prepared for entrance examinations, or for entrance on certificate if their ability and performance warrant.
4. The offering of a general program to those who do not plan to enter college, that they may develop a taste for the better things in life and that they may advance to a larger personal growth.
5. The selection of the most competent and experienced faculty available.
6. The maintenance of the excellent work which has earned for the School the approval of the New England College Entrance Certificate Board.
7. The personal interest of every school officer in the individual problem of the student.

LOCATION OF THE SCHOOL

The work of the School is conducted in three buildings of Northeastern University situated on an eight acre campus on Huntington Avenue just beyond Massachusetts Avenue opposite the Boston Opera House.

The West Building at 360 Huntington Avenue contains the headquarters of the School. This building has more than a hundred thousand square feet of space and is adequately equipped with

classroom, drawing room, and laboratory facilities. In the basement are the check-room, the bookstore, and the Husky Hut.

The East Building of the University is the educational wing of the Huntington Avenue Branch of the Young Men's Christian Association. It contains the library, classrooms, and the Chemical laboratories.

The South Building is situated in rear of the East Building and contains several classrooms, and the Electrical and Biological laboratories.

ALUMNI

The Alumni of the Lincoln Preparatory School are excellent witnesses of the work the School has done and is doing. One of our greatest rewards is the satisfaction of receiving from our former students, in the form of letters and personal visits after they have left school, their thanks and appreciation for our efforts.

Many of our graduates are engaged in the various professions, such as Law, Medicine, Teaching, and Dentistry. Lastly, many are engaged in successful business activities and in public life.

Furthermore, the School has been of benefit to many who did not complete our graduation requirements but obtained here the credits necessary for college entrance or for some other specific purpose, having completed elsewhere part of their high school training.

Women graduates of this School are in the hospital training schools of the State or have graduated therefrom. Some occupy teaching and administrative positions in our hospitals. Many others have proceeded to colleges and professional schools to prepare for positions in teaching, library science, and business.

Many of our students are in colleges and professional schools scattered across the country. The following are some of the colleges that have been attended by Alumni of the Lincoln Preparatory School:

Harvard University
Tufts College
Massachusetts Institute
of Technology
Boston University
University of Michigan
Jackson College
Purdue University
University of Alabama
University of Maryland
Columbia University

Simmons College
University of Maine
Clark University
Massachusetts State College
University of Chicago
Syracuse University
Yale University
Dartmouth College
Bowdoin College
Bates College
Northeastern University

FACULTY

In an evening school it is particularly essential that none but men of wide experience and high ideals be appointed to the faculty. Accordingly the faculty of the Lincoln Preparatory School has been very carefully chosen, all its members having been educated in the leading colleges and universities. They are men of culture and high ideals who are in sympathy with evening school students and understand their aims. They have had excellent training and wide experience in the subjects which they teach. Most of them have served with the institution for many years, and as a result of their personal devotion to the cause of education and their appreciation of the work this School is attempting, are naturally interested in its aims and success. The average length of the teaching experience of faculty members is twenty-three years. The average length of service in the School is fourteen years. All of them are at present employed during the day in the leading high and preparatory schools in Boston and vicinity or are engaged in graduate study.

STUDENT BODY

The students of the Lincoln Preparatory School are men and women of earnest purpose, who have come to recognize the value of education but who through force of circumstances have been unable to complete a high school course. The ages of the students range *from sixteen to forty-five* with the average *age twenty-four*. This fact proves conclusively that at all ages educational opportunities may be used to increase personal satisfaction through the development of a taste for the better things in life or to bring about material advancement and increased financial rewards.

Some students are attempting to increase their vocational opportunities; some are completing a high school education begun elsewhere but interrupted; some are beginning here their high school work; some are adding to their training cultural or practical subjects which were formerly omitted from their training. In fact, the School is ready to serve students of all ages at a point where they need real service.

The student body represents also men and women from all walks of life, as may be seen from the occupational distribution.

Occupational Survey

Among the occupations of the student body for the school year 1939-1940 the following are representative:

Accountants	Helpers	Porters
Auditors	Hospital Attendants	Printers
Bakers	Hospital Supervisors	Receptionists
Boat Builders	Housewives	Salesmen
Bus Boys	Insurance Agents	Secretaries
Caretakers	Laboratory Assistants	Shade Makers
Chauffeurs	Laborers	Shippers
Clergymen	Machinists	Shoeworkers
Clerks	Meat Cutters	Social Service Workers
Dental Technicians	Mechanics	Stenographers
Domestic Workers	Menders	Statisticians
Dressmakers	Musicians	Stockmen
Drivers	Nurses	Tailors
Electricians	Office Workers	Teachers
Elevator Operators	Oilers	Technicians
Factory Operators	Optical Workers	Telephone Operators
Finishers	Painters	Textile Workers
Firemen	Parcel Collectors	Tree Surgeons
Florists	Plasterer's Helpers	Upholsterers
Gas Station Attendants	Podiatrists	Waiters
Hairdressers	Policemen	Weighers

Geographical Survey

The following list indicates the areas from which the students of the school year 1939-1940 came:

Allston	Framingham	Peabody
Arlington	Greenwood	Philadelphia, Pa.
Auburndale	Hyde Park	Quincy
Beverly	Islington	Roxbury
Billerica	Jamaica Plain	Scituate
Boston	Lowell	Sharon
Brockton	Lynn	Somerville
Brookline	Malden	Swampscott
Cambridge	Marblehead	Taunton
Chelsea	Mattapan	Wakefield
Dorchester	Medford	Waverly
Duxbury	Melrose	Waltham
East Boston	Methuen	Wellesley
East Braintree	Needham	West Acton
East Weymouth	New London, Conn.	West Medford
Everett	Newton Highlands	West Medway
Fall River	Newtonville	Winchester
Foxboro	Norwood	Wollaston

INFORMATION REGARDING ADMISSION

ADMISSION REQUIREMENTS

Any man or woman of good moral character, regardless of occupation, race or creed, who has completed at least eight grades of a grammar school, or the equivalent, may enroll in the School. Provided a sufficient number enroll, special courses will be formed for those who have not completed the work of the eighth grade.

Courses adapted to the needs and education of such applicants are offered each term. It is not advisable, however, for one younger than sixteen years of age to register, for the courses are adapted to those who are more mature and are physically able to work during the day and to study at night.

Students who do not intend to enter higher institutions of learning may select from the offering of courses a special combination of subjects which will benefit them in the work in which they are engaged during the day. Before enrolling for such subjects, students are urged to see the Headmaster, explaining the particular nature of the employment in which they are engaged, so that he can arrange the course best suited for their needs. Special combinations of courses may be selected to embrace business, science, or special technical work.

APPLICATIONS FOR ADMISSION

Applications for admission should be filed as early as possible in order that the necessary investigations may be made and the status of each student definitely determined before the opening of the term. All applications must be filed on the official application blank which must be accompanied by the registration fee of five dollars.

CREDIT FROM OTHER SCHOOLS

Students who have completed high school work in other approved institutions may obtain credit for that work towards the diploma of this School by presenting a certified transcript of record from the school previously attended.

The officers of the School are glad at all times to obtain for prospective students transcripts of their records of work at other schools, evaluate such records in terms of diploma credits and

suggest a program, indicating the cost of the program and the time necessary to meet graduation requirements. *The responsibility devolves upon the student for making sure that his program does not contain a subject for which prior credit has already been awarded in some other school.* Such courses, however, may be taken without credit as review courses preparatory to later advanced work.

TUITION AND OTHER FEES

Registration Fee. \$5 is payable by all students on their initial entrance to the School. This fee is not returnable except where a student is refused admission.

REGULAR TERM

Full Courses: The Regular Term begins in September and continues for 32 weeks. During this term students may carry three courses. Exceptional students or those having ample time for study may be permitted to carry four courses.

The cost of each course is \$40. Fees are payable in eight successive monthly payments except for students carrying a single course, when payments are made in four successive monthly installments.

Payments are due on the third Tuesday of each month.

WINTER TERM

Full Courses: The Winter Term begins in January and extends for 20 weeks. The work is carried on more intensively than in the Regular Term, but the same ground is covered, primarily by means of a longer classroom period. During this term students are permitted to carry two courses.

The cost of each course is \$40. Fees are payable in four successive monthly installments.

Payments are due on the third Tuesday of each month.

SUMMER TERM

Full Courses: The Term begins in June and extends for 15 weeks. A full year's work is covered in each course, but because of the intensive nature of the work, a student's program must be limited. Superior students may be permitted to carry two courses.

The cost of each full-unit summer course is \$30. Fees are payable in three successive monthly installments.

Payments are due on the third Tuesday of each month.

SPECIAL RATES FOR SCIENCES

Biology

Tuition fee	\$40.00
Laboratory fee	10.00

Physics

Tuition fee	40.00
Laboratory fee	5.00

Chemistry

Tuition fee	40.00
Laboratory fee	5.00
Laboratory deposit	5.00

The unused portion of the chemistry deposit is refunded after deduction for breakages.

No reduction in fees is made because of late enrollment.

In certain cases even the installment plan of payment will not meet the needs of many deserving students. Such students are requested to confer with an officer of the School regarding a satisfactory plan for the payment of fees.

SCHOLARSHIPS

The Executive Council has made available a few scholarships to assist needy students of good mental capacity who, because of financial limitations, might be deprived of educational opportunities. The award when a scholarship is granted is never in excess of one-half of the student's tuition fees for the year.

TUITION REGULATIONS

CHARGES FOR PARTIAL ATTENDANCE

In the event of a student's withdrawal from school, he is charged on a *pro rata* basis for the weeks he has attended. These charges are as follows:

32-week courses — 4 per cent of the total charges for each week of attendance.

20-week courses — 6 per cent of the total charges for each week of attendance.

16-week courses — 8 per cent of the total charges for each week of attendance.

The same charges are applicable in the event that a student

abandons a part of his program. In addition the full Laboratory Fee is charged in those cases where a student is pursuing a laboratory course.

MISCELLANEOUS FEES

The fee for a condition or make-up examination regularly scheduled is \$3.

The fee for a make-up quiz regularly scheduled is \$1.50.

The diploma fee is \$3.

CHARGES FOR DAMAGES

Students who damage apparatus in the laboratories or who willfully destroy school property will be responsible for the replacement of such damaged articles or for the cost of replacing where this is undertaken by the School.

REFUND POLICY

Students who are forced to withdraw from a course or from the School are expected to notify the school office by completing the withdrawal blanks which will be furnished.

Since the School assumes the obligation of carrying the student throughout the year for which he registers, and since the instruction and accommodations are provided on a yearly basis, the Executive Council has ruled as follows:

- A. *Applications for refunds must be presented within forty-five days after withdrawal from School.*
- B. Refunds in the case of complete withdrawal from School will be granted by the Committee on Withdrawals for reasons which they deem adequate. Among the reasons deemed adequate are the following:
 - (a) Personal illness.
 - (b) Change of employment by direction of employer, whether in the schedule of time or in place of employment.
 - (c) The situation where the student becomes the sole or partial support of the family, so as to make it impossible for him to continue his studies.
 - (d) Loss of position.
 - (e) Change of residence.
 - (f) A voluntary change of employment, the hours or the residence being such that he is unable to continue attendance.

In all the above cases it is expected that a medical certificate, letter from employer, or other appropriate substantiating documentary evidence will be produced by the student.

- C. Refunds are computed from the date of application for refund, not from the date of last attendance; hence students who are compelled to discontinue attendance should immediately report the fact to the school office.

ADMINISTRATIVE REGULATIONS

EXAMINATIONS AND QUIZZES

Examinations are held throughout the term at the discretion of the instructors. Final examinations are required upon the completion of all courses. The following system of grading is used:

A	— 90 to 100	— Excellent
B	— 80 to 89	— Good
C	— 70 to 79	— Fair
D	— 60 to 69	— Lowest Passing Grade
E	— 50 to 59	— Conditioned
F	— Below 50	— Failure

A student marked E (conditioned) may enroll in the advanced course in the same subject immediately following, but upon condition that he remove his deficiency by special examination early in the next term. A fee of \$3 is required for each such examination regularly scheduled.

A student receiving the grade of B is exempt from examination when applying for admission to the colleges composing the New England College Entrance Certificate Board. A list of these colleges is given on page 27.

TRANSFERS

Students are not permitted to change from one course to another without first consulting the Headmaster and receiving a Transfer Order signed by him.

REPORTS OF STANDING

An informal report of the student's standing is issued at the end of the first term; and the formal report, covering the year's record, is issued at the close of each year.

In the case of students who are under twenty-one years of age, reports may be sent to parents in the event of unsatisfactory work on the part of the student, non-compliance with administrative regulations, continued absence, and withdrawal. Parents of minors may obtain reports at any time on request.

ATTENDANCE REQUIREMENTS

A careful record of attendance upon class exercises is kept for each student. Absence from regularly scheduled classes on any subject will seriously affect the standing of the student. It may cause the removal of certain subjects from his schedule and the listing of these as "conditioned subjects." However, if reasonable excuse for absence be presented, the student may be allowed to make up the time lost, and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course shall designate.

A minimum attendance record of 75 per cent must be maintained in all classes before a student will be admitted to examination.

LATE REGISTRATION

Students should avoid late registration. Those who find it necessary to register late may be permitted to enter the School provided they have not lost so much work as to render it impossible for them to proceed with the courses.

NOTIFY THE OFFICE IMMEDIATELY

- (a) Of any change of address;
- (b) Of withdrawal from any course — otherwise the fee for that course will be charged;
- (c) Of withdrawal from the School — giving the date of the last lecture attended.

INFORMATION REGARDING PROGRAM

THE UNIT SYSTEM EXPLAINED

Frequent reference is made in this catalog to "units," and that there may be no misunderstanding in the minds of students, this explanation is offered. A unit of high school credit is given upon the satisfactory completion of the work of one school year in a single standard subject, the equivalent of which is covered by this School in thirty-two weeks or in the intensive courses of twenty and fifteen weeks offered in the winter and summer terms respectively. The following exception is to be noted: Four full courses in English total three units towards graduation or towards college entrance.

TERMS AND HOURS OF ATTENDANCE

When assigning a program for a student the school officers usually assign work which requires attendance for *only two evenings a week*.

All classes are scheduled to meet between the hours of 7 p.m. and 10 p.m.

Each term a schedule is prepared listing the courses to be offered and the hours at which they meet. A copy may be obtained on request.

Following is the general arrangement for the completion of a course in each term of the school year.

Fall Term (32 Weeks)

One full-unit course requires attendance for one hour twice a week. Students may carry one, two, or three courses during this term.

Winter Term (20 Weeks)

One full-unit course requires attendance for one and a half hours twice a week. Students may carry one or two full-unit courses during this term.

Summer Term (15 Weeks)

One full-unit course requires attendance for one and a half hours twice a week. Students may carry one or two full-unit courses during this term.

COURSES OF STUDY

Algebra 1	German 1
Algebra 2	German 2
*Biology	Government
*Chemistry	History (Ancient)
Economics	History (European)
English 1	History (English)
English 2	History (United States)
English 3	Latin 1
English 4	Latin 2
French 1	Latin 3
French 2	Latin 4
French 3	*Mechanical Drawing
Geometry (Plane)	*Physics
Geometry (Solid)	Spanish
	Trigonometry

HOW TO PLAN YOUR PROGRAM OF CLASSES

In choosing subjects each term, students should bear in mind:

- (a) The requirements for graduation from the Lincoln Preparatory School. These are given on page 28.
- (b) The admission requirements of the higher institution they wish to enter. Catalogs of most colleges are on file at the school office. In case of doubt, consult these and talk with the Headmaster.
- (c) The special requirements for various professions and vocations.
- (d) Their special interests, in the event that courses are chosen from the cultural point of view.

It is especially important to meet the requirements for graduation so that a diploma may be obtained. Most colleges not only require fifteen units of high school work, but also insist that the student be a graduate of a recognized high school. Moreover, in business and in everyday life it means infinitely more to say one is a high school graduate than merely to say one has completed fifteen units of high school work.

*These courses meet only once a week in the fall term; all other courses meet twice a week, usually on Tuesdays and Fridays.

HOW LONG WILL IT TAKE TO OBTAIN A DIPLOMA?

The flexible schedule and the twelve months' operation of the Lincoln Preparatory School enable a student to save considerable time. The exact time that it will take to obtain a diploma is dependent upon credit from former institutions attended, hours available for study, and the number of courses pursued. A student who begins his high school work in the Lincoln Preparatory School can complete his course in from three to five years. However, it is urged upon students that *a high school education is a matter of accomplishment and not a matter of time*, and the School insists on a high standard of accomplishment.

ADMISSION TO COLLEGE

Since the Lincoln Preparatory School offers regular college preparatory courses for those who wish to enter college, a student, according to his record and his plan of procedure, may enter college in one of the following ways:

By Diploma. Certain colleges will admit students on the diploma from this School. Among these colleges are all those that accept a standard high school diploma.

By Examination. A few colleges, notably Harvard, Yale, and the Massachusetts Institute of Technology, require certain examinations from all candidates. This School prepares students for all college entrance examinations and for the examinations of the College Entrance Examination Board.

By Certificate. The School is accredited by the New England College Entrance Certificate Board. Some of the colleges which accept the certificate of this School are Amherst, Bates, Bowdoin, Colby, Massachusetts State College, Clark, Middlebury, Tufts, Wesleyan, and Williams. Generally speaking, *institutions that accept students by the certificate method will accept the certificate of this School. The certificate grade is 80 per cent.*

REQUIREMENTS FOR GRADUATION

The diploma of the Lincoln Preparatory School is granted on the completion of fifteen units of work, of which at least four must have been earned in the Lincoln Preparatory School. In addition, each student must have completed in this School or elsewhere the required subjects for the diploma for which he is a candidate.

CURRICULA

College Course Diploma

A. For admission to Liberal Arts Colleges

This course prepares for most colleges that offer the degree of Bachelor of Arts.

<i>Required:</i>	Units
College Preparatory English	3
Algebra	2
Plane Geometry	1
French, or German, or Spanish	2
Physics, or Chemistry, or Biology	1
United States History	1
Latin, or Greek	2
	12

Elective:

The remaining three units may be selected from the following:

	Units
Spanish	2 to 3
Latin	1 to 2
French	1 to 2
European History	1
Ancient History	1
Solid Geometry	1½
Trigonometry	1½
Chemistry, or Physics, or Biology	1

One unit of a foreign language is not acceptable for credit.

Language and Mathematics requirements vary somewhat for entrance to the different colleges. This is especially true of the Latin requirements. Some colleges require three entrance units in either French or German. *It is the student's responsibility to meet the requirements of the college he elects to enter.*

In addition, other electives may be permitted by special consent provided they are acceptable by the college to which the student seeks entrance.

B. For admission to Engineering Schools and Colleges of Liberal Arts offering the degree of Bachelor of Science

<i>Required:</i>	Units
English.....	3
French, or German, or Spanish.....	3
Algebra.....	2
Plane Geometry.....	1
Physics, or Chemistry.....	1
United States History.....	1
Trigonometry and Solid Geometry.....	1
	<u>12</u>

Language and Mathematics requirements vary somewhat for entrance to the different colleges. *It is the student's responsibility to meet the requirements of the college he elects to enter.*

Elective:

Subjects may be selected from either the Required or Elective List of the College Course to make up the necessary fifteen units.

One unit of a foreign language is not acceptable for credit.

General Course Diploma

The General Course offers a general education and also, *if the right selection of subjects is made*, enables students to enter certain colleges. A wide selection of subjects is available but choice of as many college preparatory subjects as possible should be made.

Required: Five Units

	Units
English.....	3
United States History.....	1
Physics, or Chemistry, or Biology.....	1
	<u>5</u>

Limited Electives: Three Units (choose one option)

Mathematics Option

Algebra 1 and 2 and Plane Geometry.....	3
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Language Option

Three units of any one of the following or two units of any two:
French, Latin, German, and Spanish..... 3 or 4

Social Science Option

Economics, Government, English History, Ancient History, European History, etc.....	3
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Free Electives: Seven Units

Any standard high school subjects to complete total of 15 units.

One unit of a foreign language is not acceptable for credit.

SPECIAL PROGRAM FOR ADMISSION TO TRAINING SCHOOLS FOR NURSES

The State Board of Registration in Medicine and the Board of Registration for Nurses have ruled that a high school education or its equivalent is a prerequisite for admission to hospital training schools.

The high school certificate must show the completion of fifteen units accepted by the high school in meeting graduation requirements. These fifteen units are to be as follows:

<i>Required (6 units)</i>	Units
1. English (4 years)	3
2. United States History	1
3. Mathematics or Science	2

Limited Electives (6 units)

1. Foreign Modern Language	2 to 4
2. Greek or Latin	2 to 3
3. Mathematics	1 to 4
4. Science	1 to 4
5. Social Studies	1
6. Commercial Subjects	1
7. Practical Arts	1

Free Electives (3 units)

These three units may consist of any work which the high school accepts as meeting its graduation requirements.

An officer of the School will be glad to arrange a program so that these electives will be judiciously chosen, not only to aid the student in the subsequent subjects, but to meet the requirements of other States with whom a reciprocal arrangement exists with the State of Massachusetts.

For those already engaged in the profession of nursing, attention is directed to facilities which are available to those who have not completed a high school education in accordance with the above demands. New regulations have been formed regarding institutional promotion and regarding teaching and administrative

positions in hospitals, and while such legislation is not retroactive, it will certainly prove helpful to those who already occupy such positions to be adequately equipped for advancement and promotion in the event of transfer.

The work conducted by the Lincoln Preparatory School is acceptable to Massachusetts hospitals and to the State Board of Registration in Medicine.

GENERAL INFORMATION

LIBRARIES

The School has excellent facilities for study in the Northeastern University library and reading room, which is equipped with dictionaries, encyclopedias, and special texts for carrying on the work of the School effectively.

Students also have the privilege of taking books from the Boston Public Library and of using the library for general reference and reading.

TEXTBOOKS AND SUPPLIES

The Lincoln Preparatory School enjoys the facilities of the Northeastern University Bookstore, which is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

RAILROAD TICKETS

Vouchers for half-fare tickets on the Boston Elevated Railroad are issued by the school office on the first, sixth, and eleventh Fridays of each term. The railroad systems entering Boston issue students' tickets to students under twenty-one years of age. Applications for these may be obtained at a railroad office and presented at the school office for signature.

VISITORS

Visitors are always welcome at one class session in any department. Those who wish to visit any of the classes should call at the school office and obtain a visitor's card signed by the Headmaster.

INTERVIEWS AND EDUCATIONAL GUIDANCE

Prospective students or those desiring advice or guidance with regard to any part of the school work or curricula, or who wish assistance in the solution of their educational problems, should note the fact that interviews are available without obligation, and that the officers of the School will do their utmost to see that a program is designed which is the most satisfactory for the individual student. In certain cases, other institutions may be recommended which suit the student's needs better. Furthermore, it is important that those with educational problems to solve should realize the necessity for care in approaching educational work so that the program selected will be on the best educational basis.

OUTLINES OF COURSES

Note: The courses of the School are arranged in "units."

A unit is ordinarily the amount of work covered in a single subject taken four or five times a week for a year in a standard day high school.

In this School a unit may be covered in each subject in thirty-two weeks. See page 25 for explanation of unit system.

Students carry one, two or sometimes three subjects at a time. Fifteen units, properly selected (see pages 28 and 29), are required for graduation.

The high school courses described below are the equivalent of similar courses offered in a standard day high school.

The Lincoln Preparatory School reserves the right to change the arrangement of courses, the requirements for graduation, tuition fees, and other regulations affecting the students. Such regulations will affect both old and new students.

ENGLISH

The fundamental purposes of the department are to give the student efficient training in grammar in order to afford a sound basis for correct speech and writing; to instill correct principles of constructing sentences and paragraphs; to help him enlarge his vocabulary and to acquire an interest in words; to train him in the elements of logic as related to the organization and expression of thought; to teach him how to study; to impart an elementary knowledge of the types and the history of English literature; and to aid him in forming a taste for good literature and a genuine appreciation thereof.

English 1. This course is designed to bridge the gap between grade and high school English. Fundamentals of English grammar, the correct sentence, the more important rules of spelling and punctuation, simple compositions — especially the letter — and an introduction to literary selections as models for voluntary reading are presented.

English 2. This course marks the beginning of a more intensive study of English, both as a tool and as literature. Functional grammar, development of the paragraph, careful planning of themes, and a beginning of the critical study of literary forms, both poetry and prose, form the basis of the course.

English 3. This is an advanced course in composition including précis-writing and the structure of paragraphs and sentences. There is a rapid review of grammar and punctuation. The essay, the drama, the novel, and types of poetry are studied.

English 4. This is a college-preparatory course in composition and literature, with a thorough review of the fundamentals. Special attention is paid to the requirements of the College Entrance Examination Board.

LATIN

Exercises in translation at sight begin with the first lessons in which Latin sentences of any length occur, and continue throughout the course to insure correct methods of work on the part of the student. In the translations of passages from the Latin, the use of clear and natural English is insisted upon. Reading aloud is encouraged. The work in Latin Composition aims to give the student a thorough knowledge of the fundamental principles of Latin syntax. It has been found advantageous to use a double system of notebooks, calling for special written

work from the student. This work deals with Latin forms, principles of Latin syntax, writing of English-Latin sentences, and finished translations of selected passages from the Latin. These courses in Latin fulfill the requirements of college entrance examinations.

Latin 1. Exercises in translations, English-Latin, Latin-English. Drill in Latin forms, drill in Latin syntax. The course aims to give the student a thorough knowledge of the fundamental principles of Latin syntax.

Latin 2. The Latin reading is not less in amount than Cæsar, Gallic War, I-IV. This amount of reading is taken from Caesar (Gallic War and Civil War), Nepos (Lives), Aulus Gellius, Eutropius, Phaedrus, Quintus Curtius Rufus, and Valerius Maximus, or books of selections containing some of these with other authors of prose works. Special attention is given to sight translation, to vocabulary study, to the Latin Word List, which contains those words the student is expected to know at the end of two years of the study of Latin. There is continued drill in Latin syntax and in Latin forms. This course in second year Latin aims to meet the needs of those students who plan to enter colleges that require only two years of Latin.

Latin 3. The Latin reading is not less in amount than Cicero, the oration against Catiline, for the Manilian Law, and for Archias. This amount of reading is selected from Cicero (orations, letters, and De Senectute), Sallust (Catiline and Jugurthine War). The reading for the year includes selections from such authors as Pliny, Livy, or books of selections containing these and other authors of prose works. Special attention is given to the study of passages of Latin prose set for comprehension. The course aims to cultivate in the student the ability to render unseen passages of Latin prose into clear and natural English, as well as the ability to write simple Latin prose. Due attention is given, therefore, to vocabulary study, to the Latin Word List, which contains those words the student is expected to know at the end of three years of the study of Latin. The political and social life in Rome in the time of Cicero is studied.

Latin 4. The reading is not less in amount than Virgil, Aeneid I-IV. This amount of reading is taken from Virgil (Bucolics, Georgics, Aeneid), Ovid (Metamorphoses, Fasti, and Tristia), or from books of selections containing poems or extracts from other poets. Special attention is given to the study of passages of Latin verse set for comprehension. The course aims to cultivate in the student the ability to render unseen passages of Latin verse into clear and natural English, as well as the ability to write simple Latin prose. Due attention is given, therefore, to Latin forms, Latin syntax, to vocabulary study, to the Latin Word List, which contains those words the student is expected to know at the end of four years of the study of Latin. Literary and historical allusions, prosody, and questions on subject matter are studied.

FRENCH

The courses in French are planned with the purpose of giving the students (1) an appreciative comprehension of French, both as literature and as a spoken language; and (2) a sufficient knowledge to fit them for advanced work. The essentials of the grammar are mastered by continued drill and constant application. The attainment of good pronunciation receives careful attention, and from the beginning the student is trained to understand spoken French.

French 1. This course begins with instruction in pronunciation and division of words into syllables. Phonetic symbols are not used. The acquisition of a basic vocabulary is stressed and the memorizing of word groups and short sentences.

The instruction in grammar consists of the elementary forms and uses of articles, nouns, adjectives, pronouns, adverbs, regular verbs, and a few common irregular verbs. Much emphasis is placed upon written translation of English into French.

The reading text provides for the translation of at least seventy-five pages of simple French. This is largely oral translation.

The textbooks are Roux' "Premier Cours de Francais" and Roux' "Elementary French Reader."

French 2. This course completes the elements of grammar and syntax, with great emphasis upon forms and practice in their use in written composition. Frequent review lessons help to make the student familiar with the essentials.

The textbooks are Olmsted-Sirich's "Alternate French Review Grammar" and Ford and Hicks's "A New French Reader," which provides selections from the works of well-known French authors and gives a useful vocabulary of common words.

French 3. Carnahan's "Alternate French Review Grammar" is used and provides a general review and further advance in grammar and in written translation or connected prose. All the common irregular verbs and many idioms should be learned.

Buffum's "French Short Stories" provides for the reading of selections from the works of several modern prose authors.

GERMAN

At the end of the elementary course in German, the student should be able to read at sight and to translate a passage of easy German prose. He should be able to put into German, short English sentences taken from the language of everyday life, and to answer questions upon principles of German grammar. The course aims to meet the needs not only of those students who are seeking a general knowledge of German, but also of those students who are planning to take the college entrance examinations.

German 1. Chiles-Wiehr "First German Book" is used as a grammar and composition book. This is supplemented by reading Gueber Märchen und Erzählungen I, II, Immensee by Storm. Drill in pronunciation; practice in reading the German text aloud; memorizing of simple verse and prose selections.

German 2. "Chiles German Composition and Conversation" is used as a textbook. This is supplemented by reading "Emil und die Detektive" by Kästner, followed by translating such works as "Germelshausen" by Gerstäcker, "Die Braune Erica," by Jensen. Exercises in comprehension; memorizing of simple German verse and prose selections. "German Frequency Word Book" by Morgan, "German Idiom Word List" by Hauch are used.

SPANISH

Spanish 1. The work of the first year is so planned that it serves as a complete unit in fundamentals for the student who wishes to continue the language independently by travel or reading. Correct pronunciation, a knowledge of the grammatical structure of the language, and an ability to read and write within the

limits of a practical vocabulary are the goals of the course. Standard elementary readers are used in connection with a grammar text such as Hills and Ford, "First Spanish Course."

Spanish 2. After a rapid review of the work covered by Spanish 1, the second year is devoted to the enlargement of vocabulary, including common idioms, the increase of skill and speed in translation with special emphasis upon sight translation and free composition. The course prepares for the elementary examination in Spanish given by the College Entrance Examination Board. The use of a standard composition book is supplemented by much reading of current as well as classical Spanish.

HISTORY, GOVERNMENT, ECONOMICS

The aim of the department is to give a broad knowledge of vital conditions in the growth of the leading countries of the world. This includes the study, not only of important historical facts, but more especially of the progress of development in government, society, business, religion, and education. The past is studied that the present may be better understood.

History (English). This course is a study of English History from the time of the Roman Conquest to the present. Special emphasis is given to the study of the structure of government and the legal system because of their bearing upon American development. Study of English foreign policy is essential to a better understanding of international problems of the present. Study of church problems, the Industrial Revolution, democratic growth are stressed because of present-day tolerant attitude in regard to religion, views as to wisdom of dictatorial or democratic government, and ever changing economic conditions.

History (United States). A careful and comprehensive study is made of United States History, including not only the story of earlier times, but also an analysis of events from the Civil War down to and including our own times. Special reference is made to the social and industrial development of the country, economic progress, sources and effects of immigration, and of American government. The course is designed to cover the requirements of the College Entrance Examination Board.

History (European). In this course a study is made of the European powers from the beginning of the seventeenth century to the present. Autocracy rampant in the seventeenth and eighteenth centuries begins to decline in the latter eighteenth century with the French Revolution. The decline continued in the nineteenth century, giving way to democracy, which reached its peak following the World War, only to yield in many countries to dictatorships of the present day. International relations are traced, noting especially the influence of commerce and the subsequent imperial rivalries and wars. The Industrial Revolution, with its profound effect upon humanity, forms another important part of the course. Considerable stress is given to great leaders of the different European powers.

History (Ancient). This course devotes one term to the study of the Ancient Orient and Greece as far as the death of Alexander and the break-up of his empire, with the expansion of Greek culture in the Mediterranean world. The second term is devoted to the study of the history of Rome to the year 476 A.D. The course emphasizes the characteristic elements of these civilizations. The work calls for the study of an accurate historical textbook, in which not less than five

hundred pages of text are devoted to the particular subject. Special attention is given to map study. The work is supplemented by a topical study of outstanding phases of the history of the period, including growth of institutions, historic characters, outstanding events and periods. The work calls for consultation of standard writers on Ancient History, especially books of Readings in Ancient History. The aim of the course is to meet the needs of those students who are seeking a general knowledge of the subject as given in a high school, to prepare students for the examinations that are given by the College Entrance Examination Board as defined in the Definition of Requirements, published by the Board.

Government. The forms of our local and state governments are taken up first. These are followed by a careful analysis of the Constitution of the United States, showing the relationship of the executive, legislative, and judicial branches of our National Government.

During the second semester a study is made of South America and the principal nations of Europe, and in addition the smaller nations where innovations may make investigation of governmental methods worth while.

Economics. The origin and development of our industrial system, and an analysis into its component parts, together with the economic phenomena accompanying them. It is intended to make economics of practical value in everyday life.

During the second semester the course embraces the reform and improvement of our industrial system; taxation, the tariff, international trade, transportation, labor and capital, public ownership, wages and profits, and other current economic problems are treated.

MATHEMATICS

The courses in mathematics are planned to meet the needs of all secondary students. They afford an opportunity for preparation in the mathematical processes which are necessary for success in industrial, commercial, or professional careers. They are intended (1) to acquaint the student with such mathematical processes and methods as he is most likely to need in the successful pursuit of other studies and in the various trades and occupations; (2) to prepare the student for the successful pursuit of the more advanced branches of mathematics in technical schools and colleges.

Algebra 1. This course introduces the student to: (1) the positive and the negative number; to its application in the four fundamental operations leading up to the solving of formulas and equations, both linear and fractional in one and two unknowns; (2) the function of the graph for both pictorial representation and the solving of equations; (3) the literal number and the study of problems.

Algebra 2. Review of Elementary Algebra with more difficult problems. Quadratics and simultaneous quadratic equations, with applications, progressions, binomial theorem, logarithms, and that part of Trigonometry required by the College Entrance Examination Board.

Geometry, Plane. The five books of Plane Geometry are studied. The numerous original exercises stimulate the power to reason clearly and to derive logical proofs. Special attention is given to those who expect to take college entrance examinations. This course meets College Entrance Board requirements.

Geometry, Solid. This course comprises the standard theorems in Solid and Spherical Geometry. Stress is laid upon numerical exercises involving mensuration of solid figures. The work is designed primarily for those who are preparing for college. This course meets College Entrance Board requirements.

Trigonometry. This course is intended for those who wish to offer Trigonometry for college entrance, or for those who intend to take up engineering.

DRAWING

Mechanical Drawing. The fundamentals of Mechanical Drawing are stressed in this course. A credit towards college entrance will be granted upon the completion of sixty-five problems or the equivalent. All work is individual and admits of progress according to the student's ability.

Instruction is given in the testing, use and care of the instruments and drawing supplies, and about thirty drawing plates are made. The topics studied in these plates include: technique practice, lettering, geometric constructions, orthographic projection, auxiliary views, revolution of objects, isometric, cavalier, cabinet and perspective projection, intersections, sections, helix and application, screw threads, dimensioning and inking.

SCIENCE

Biology. This is a comprehensive course in Biology dealing with plants and animals; their relation to their environment. The fundamental phenomena of living things are stressed. The general biological laws and theories are discussed. Whenever possible, biological principles are illustrated by the laboratory study of both plant and animal forms.

Physics. This course is intended for two groups of students. First, it will meet the requirements of those expecting to enter a college or technical school. Secondly, it is intended to help those who wish a general knowledge of the important laws and principles of Physics as applied to modern everyday experiences. The applications of Physics in such fields as household appliances, the weather, the automobile, the airplane, radio, etc., are particularly stressed with the idea of giving a background of culture and enjoyment.

Many students interested in mechanical lines will find it giving them a clearer understanding of the operations of devices of which they make constant use.

Laboratory experiments and lecture table demonstrations will illustrate the subject matter studied in the text.

Although the course is not intended to be highly theoretical, an elementary knowledge of Algebra and Geometry will be of assistance in the solution of problems.

Chemistry. This course has the twofold aim of preparing the student in Chemistry for entrance to any college or technical school and providing a general introduction to the subject for other purposes.

There are class discussions of chemical principles and of chemical materials, solution of numerical problems, practice in such exercises as writing of equations, demonstration experiments carried through by the instructor. The student does assigned experiments in the laboratory and writes reports of his work.

The more important elements, both non-metallic and metallic, as well as numerous compounds, are studied. Important laws and hypotheses of Chemistry are constantly stressed.

Unless there is urgent reason for following a different order, the student is advised to arrange his succession of courses in such a way that Chemistry will be preceded by a study of Physics.

Huntington School



THE
HUNTINGTON
SCHOOL
for BOYS

An Urban Private Day School

*With the Advantages and Physical Facilities of a
Country Day School*

320 HUNTINGTON AVENUE
BOSTON, MASS.

FOREWORD

The Huntington School for Boys has as its primary purpose the adequate preparation of its students not only for entrance to but especially for success in the best colleges and universities. In this accomplishment the School has enjoyed a most creditable success.

The Huntington School has developed over a long period of years into a well organized and unified school, in which the outstanding factors are the excellence of the faculty, the results accomplished in preparing boys for college, the quality of the student body, and the splendid physical equipment.

This catalog sets forth in some detail what Huntington offers to boys of Greater Boston as a result of years of experience in preparing boys for college.

Within its pages we sincerely hope that our many friends, and the new friends whom we look forward to meeting and serving, will find such information as will be truly helpful in the solution of the very important problems which must be solved with boys who wish to go to college.

HUNTINGTON SCHOOL FOR BOYS

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Mathematics, Mechanical Drawing

ROLAND LEO LEACH, A.B., ED.M.
(Tufts College) (Harvard University)
French and German
Director of Dramatic and French Clubs

JAMES HARRIS MORSS, A.B., ED.M.
(Boston University) (Harvard University)
English

ARTHUR EUGENE NEWCOMB, JR., A.B., ED.M.
(Middlebury College) (Boston University)
English
Director of Literary Club

FACULTY (Continued)

ALFRED LORING SKINNER, A.B.
(Harvard University)
Mathematics

JOHN MOORE TROUT, JR., A.B., ED.M.
(Princeton University) (Harvard University)
English, French and German
Director of Chess Club

HAROLD CLAYTON WILCOX, S.B., S.M.
(Rhode Island State College) (Brown University)
Physics and Chemistry
Director of Science Club

WILLIAM GREENE WILKINSON, A.B., ED.M.
(Boston University)
(University of Kentucky) (McGill University) (Ecole Montcel)
French and Spanish

COACHING STAFF

Director of Athletics

Track

Basketball

Swimming

Baseball }

Football }

Tennis

Intermediate School Athletics

WILLIAM GREENE WILKINSON

THEODORE MARTIN CHASE

EDWARD ALEXANDER BARTLETT

RAYMOND ENGLISH MILLARD

THOMAS ALFRED BLAKE

JOHN MOORE TROUT, JR.

PERCY EDWARD JONES

EMILY RAMSAY, *Executive Secretary*

EVELYN YOUNG, *Secretary to the Headmaster*

MIRIAM BLAKE, *Recorder*

MYRA WHITE, *Librarian*

JOHAN GUSTAVE LARSSON, M.D., *School Physician*

CALENDAR

1940-1941

School Year Begins	SEPTEMBER 18
Christmas Vacation Begins	DECEMBER 20
Christmas Vacation Ends	JANUARY 3
First Semester Examinations	JANUARY 24-31
Second Semester Begins	FEBRUARY 3
Spring Vacation Begins	APRIL 4
Spring Vacation Ends	APRIL 11
Final Examinations	MAY 26-JUNE 3
Commencement	JUNE 6
Special Program for College Board Examination Students	JUNE 9-13
College Entrance Board Examinations	JUNE 16-21
Summer Session (1940)	JULY 8-AUGUST 30
Summer Session (1941)	JULY 7-AUGUST 29

HOLIDAYS

Columbus Day, Armistice Day, Thanksgiving Day, Washington's Birthday, Patriots' Day, Memorial Day.

GENERAL INFORMATION

INTRODUCTION

THE HUNTINGTON SCHOOL was established in September, 1909.

From the outset, emphasis has been placed upon the development of those qualities and habits which it is necessary for boys to possess if they are to succeed in meeting college entrance requirements and to succeed in college after gaining admission.

The School offers both a College Preparatory and General Course. Most boys who graduate from the General Course enter Colleges of Business Administration.

With the passing of the years fathers and mothers have made it very apparent that in Greater Boston there is need for a first-class private day school such as Huntington which presents a strong college entrance program, in an environment where character qualities are emphasized, and which, at the same time, allows their boys to remain under the direct influence of the home.

Huntington boys come from all points in Boston and the surrounding cities and towns, and at times we have students who commute from as far as Worcester, Providence and New Hampshire towns and cities.

Huntington is today the only urban private day school in Boston which presents a complete development program or has the facilities for doing so.

Huntington students have every opportunity to attain a sound and well-developed body, strong character, and independence of thought, through daily association with well-rounded Christian men, in their studies, sports and general school life.

Graduates of Huntington are found in practically all of the New England colleges and in many colleges and universities located outside of this area.

The School limits its enrollment to a maximum of two hundred boys each year. There is no desire to increase this number. It is sufficiently large for the promotion of school activities which are of interest and value to growing boys. The School is not so large as to make it difficult for the

Headmaster and his associates to keep in touch with each individual.

The School enrolls boys in the forms corresponding to the ninth grade through the twelfth grade. The student body is, therefore, divided into four forms. It is our belief that the best time for a boy to start his preparatory work for college is not later than beginning with the ninth grade. The School enrolls boys, however, in any form for which they are adequately prepared.

Although Huntington is a Day School, a few boarding students are accepted. The School accepts no responsibility for such students in respect to activities outside of school hours. The School will co-operate to the fullest extent, however, in arranging for satisfactory living quarters for those who come from a distance.

THE COMPLETE DEVELOPMENT PROGRAM AT HUNTINGTON

THE SCHOOL believes in the complete development of the individual and many opportunities are given a boy to discover and develop latent qualities.

For this reason, in addition to the regular program of studies there has been developed an extra-curricular program offering opportunities for supervised play, musical and other club activities. Competent leadership and excellent facilities are available for both the educational and extra-curricular programs.

Scholarship must, in a college preparatory school such as Huntington, occupy first place in its productive efforts but we believe that the boy who goes on to college with an appreciation of values as they should exist in a normal, active and happy life, is in a better position to succeed than one who does not have this appreciation.

LOCATION

THE SCHOOL is located in the Boston Y. M. C. A. building at 320 Huntington Avenue (nearly opposite the Boston Opera House) in the educational and cultural center of Boston. It is within easy reach of all points in Greater Boston. The running time by surface cars from Back Bay

Station is five minutes, and the cars from both the North and South Stations (by way of Park Street) reach the School in twenty-five minutes. The School is within easy walking distance of the Huntington Avenue, Trinity Place and Back Bay railroad stations. For those who use surface cars only, the School is fifteen minutes from Park Street in the Subway and a few minutes from Massachusetts Station in the Boylston Street Tunnel. The School is accessible by trolley and automobile from all suburban sections. There are parking facilities.

BUILDINGS

THE SCHOOL is housed in a building especially equipped for educational work and for successfully carrying on the complete program which it sponsors.

RECITATION BUILDING	The recitation rooms, the physics and chemistry laboratories, and the drawing rooms are on the second, third, and fourth floors.
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NATATORIUM	The swimming pool, seventy-five feet long by twenty-five feet wide, is supplied with filtered water heated to a proper temperature by an elaborate system of pipes. It is one of the finest in New England. The School has special hours reserved in the pool for its general swimming work.
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GYMNASIUM	In the rear of the main building, and closely connected with it, is the Samuel Johnson Memorial Gymnasium, the largest indoor gymnasium in Boston. On the main floor is the gymnasium proper, equipped with the best of apparatus. The running track which encircles it fifteen feet above the floor level is twelve laps to the mile. A visitors' gallery on the same level seats 500. A special locker room, shower baths and special exercising rooms are on the floor beneath the gymnasium proper. The Huntington School has the use of the entire gymnasium area and equipment at definite scheduled periods.
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EQUIPMENT

CLASSROOMS	The classrooms are of standard size and are completely equipped with modern school furniture.
LABORATORIES	The School has well equipped laboratories for physics and chemistry for conducting its science courses.
LIBRARY	The School has excellent library facilities.
DRAWING ROOM	There is a well lighted and properly equipped mechanical drawing room.

PLAYGROUNDS

THE HUNTINGTON SCHOOL has an athletic field of approximately five acres in the Longwood section of Brookline, on Kent Street, one and one-half miles from the school building. Transportation is furnished free of charge to and from the field. Here are ample and excellent facilities for all out-of-door sports. A completely equipped field house furnishes adequate facilities for both home and visiting teams. Altogether the School has one of the best athletic fields in Greater Boston. In addition to these grounds there are available at the school building tennis courts, jumping pits, and other facilities for games and sports.

MORNING ASSEMBLY

THREE TIMES each week all students assemble in Bates Hall for the purpose of taking part in a brief devotional program. At this time matters of general interest in the school life are presented to the students.

The School is non-sectarian but thoroughly Christian in the conduct of all its religious activities. Occasionally at this

time educational talks of value are presented, and special programs are given by the boys, such as rallies, concerts, short plays, and speaking programs in observance of the holidays.

LUNCH ROOM

A LARGE LUNCH ROOM is provided in the building. A satisfactory lunch may be had at a moderate cost.

INTERMEDIATE AND SENIOR GROUPS

THE HUNTINGTON SCHOOL's student body is divided into two principal groups indicated as Intermediate and Senior. Boys in the intermediate group are those taking subjects customarily offered in the ninth and tenth grades. The senior group is composed of boys who have one or two years of work to complete before entering college.

SPECIAL STUDENTS

HUNTINGTON accepts each year a limited number of special students. Those taking one, two, or three subjects are so classified. Special students work for credit but not for the school diploma.

DECISION ON TYPE OF COLLEGE COURSE IMPORTANT

PARENTS AND STUDENTS should understand that admission to an A.B. degree course in college generally requires that the student shall have demonstrated an ability to succeed well in the field of languages, either Ancient or Modern, and in social subjects such as History. Generally speaking, boys who enter college for the purpose of earning a B.S. degree should have shown ability somewhat above the average in the field of Mathematics and Science. It is highly important that boys who enter college for the purpose of earning any degree should be good English students. We believe that one of the most important things we accomplish in the Huntington School is to discover the best type of college in which a boy is most likely to succeed.

ADMISSION REQUIREMENTS

PARENTS OR GUARDIANS who wish to enter their boys in the School should fill in the Application Blank, which may be found at the back of the catalog, and return it to the Headmaster.

The School requires testimonials of good moral character of all students.

It is expected that no boy will apply for admission whose conduct in other schools has brought him discredit.

Early registration results in advantage to the student as special attention to his particular needs is made possible. A personal interview with the Headmaster of the School is required.

A registration fee of five dollars must accompany the application. This fee is in addition to the regular tuition charge and when once paid it will not be refunded.

Boys are accepted for admission to all grades from the ninth through the twelfth.

ENTRANCE EXAMINATIONS

THE SCHOOL reserves the right to give entrance examinations if such a procedure seems advisable. These examinations may be oral or written; they may be in the form of psychological examinations or aptitude tests.

The policy of the School is a liberal one as far as entrance requirements are concerned. Most Huntington students are admitted because of satisfactory previous records, without examination.

CLASSIFICATION

IN THE UPPER Forms a boy is classified according to the units he has earned for college entrance.

Boys are accepted for the First Form (ninth grade) on the basis of previous records, scholastic and otherwise, and, if necessary, of entrance examination results.

GRADUATION REQUIREMENTS AND CURRICULA

STUDENTS in the Huntington School are obliged to meet certain requirements in regard to length of time in attendance, scholastic standing, and course of study, before a diploma can be awarded.

Diplomas are granted from two courses; namely, College Preparatory and General:

COLLEGE PREPARATORY DIPLOMA

FIFTEEN UNITS acceptable for college entrance are required for graduation. No student will be graduated with the College Preparatory diploma unless he can produce evidence of having received either in the Huntington School, or some other accredited school, B grades or better in at least eight units of work, or of having passed eight units of work in approved college entrance examinations. At least eight units of required work must be completed at Huntington, four of which must be of B grade or better. This applies to all students regardless of the number of years in attendance. In the remaining seven of the fifteen units required for graduation no grades less than C are acceptable. A unit is given for each subject taken five periods a week throughout the school year or the equivalent thereof, except that four years of English are counted as three units. A student must be in attendance for at least one year to receive the College Preparatory diploma.

EXPLANATORY NOTE

Parents and boys should know how it is possible to earn a Huntington School diploma in one year and the position in which a boy must be at the beginning of the year in order to accomplish this.

It is obvious that at least four years of work in one or more high or preparatory schools are necessary for securing an accredited diploma. Many boys who earn such in the Huntington School are already high school graduates. Eight units of work can be completed in a regular schedule in one year. Such a schedule might well be: English IV (3 units); Modern Language (2 units); Algebra II (2 units); and American History (1 unit).

A boy should know that while completion of such a subject as French III with a B grade entitles him to three (3) units towards graduation from the Huntington School, it by no means insures certification to college in three (3) units. This is a matter which must be decided by the Director of Admissions of the college. If there is doubt, the College Entrance Board examinations should be taken.

GENERAL COURSE DIPLOMA

FIFTEEN UNITS are required for graduation in the General Course. At least eight of these required units must be completed at Huntington. A unit is given for each subject taken five periods a week throughout the school year or the equivalent thereof, except that four years of English are counted as three units.

All subjects must be passed with a grade of C or better.

Graduates from our General Course most frequently enter Business Administration colleges and arrange their schedules on that basis.

COLLEGE ENTRANCE UNITS

FIFTEEN UNITS are required by most colleges for entrance. Each year the Huntington School sends to college several students who do not graduate but who come to us for the purpose of earning sufficient units, in addition to those previously earned elsewhere, so that they can be accepted by the college of their choice.

Since promotion at Huntington is entirely by subjects, the School is in an excellent position to serve those who do not need a full program of study or who do not necessarily need to meet our graduation requirements in order to enter college.

COLLEGE PREPARATORY COURSE

Required:	Units
College Preparatory English (4 years)	3
Algebra	2
Plane Geometry	1
French, German, or Spanish	2
Physics or Chemistry	1
American, Ancient, or European History	1
	<hr/>
	10

<i>Electives:</i>	<i>Units</i>
Latin	2, 3 or 4
French, German, or Spanish	2 or 3
Physics or Chemistry	1
American, Ancient, or European History	1
Solid Geometry	$\frac{1}{2}$
Trigonometry	$\frac{1}{2}$
Mechanical Drawing	1 or $\frac{1}{2}$

In addition, other electives may be permitted by special consent provided they are accepted by the college to which the student seeks entrance.

Language and Mathematics requirements vary somewhat for entrance to the different colleges. This is especially true of the Latin and Modern Language requirements. Some colleges require three entrance units in either French or German. Some technical colleges require Solid Geometry or Trigonometry or both for entrance. It is the student's responsibility to meet the requirements of the college he elects to enter.

Some colleges accept a limited number of credits in Business Subjects.

GENERAL COURSE

THE GENERAL COURSE prepares one to occupy a position in business life and also, if the right selection of subjects is made, to enter Colleges of Business Administration such as those of Boston University, Syracuse University, and Northeastern University.

A wide selection of subjects is possible, but choice of many college preparatory subjects should be made.

<i>Required:</i>	<i>Units</i>
College Preparatory English (4 years)	3
American, Ancient, or European History	1
Physics, Chemistry, or Biology	1
Algebra I	1
	6

Electives:

The remaining 9 units may be selected from the following:

	Units
American, Ancient, or European History	1
French, German, or Spanish.....	2
Physics or Chemistry.....	1
Plane Geometry.....	1
Bookkeeping.....	1 or 2
Mechanical Drawing.....	$\frac{1}{2}$ or 1
General Science.....	$\frac{1}{2}$ or 1
Business Arithmetic.....	$\frac{1}{2}$
Business Law.....	$\frac{1}{2}$
Economics.....	$\frac{1}{2}$
Commerce and Industry.....	$\frac{1}{2}$
Civics.....	$\frac{1}{2}$ or 1

or from any college preparatory subjects offered by the School.

SPECIAL ONE-YEAR COURSE FOR HIGH SCHOOL GRADUATES

MANY boys need an additional year of preparation before going to college; some need to strengthen their foundation before attempting college work; some need additional units of certificate grade; and some need intensive preparation for the College Entrance Board examinations (either Plan A or Plan B). This course has been a very popular one at Huntington and much has been done for boys enrolled in it.

PREPARATION FOR COLLEGE

IN THE HUNTINGTON SCHOOL a boy can be prepared for entrance to any college. The teaching staff is experienced in this field and all courses are arranged with college entrance always in view.

There are three principal methods by which a boy may meet the college entrance requirements. These are: (1) By certificate; (2) By examination; and (3) By a combination of certificate and examination.

Such colleges as Harvard, Yale, Princeton, and the Massachusetts Institute of Technology as a rule require that either the student pass the College Entrance Board examinations or the examinations set by the colleges themselves. In the case of Harvard, the College Board examinations must be passed.

Any boy interested in entering any one of the above colleges should consult the various college catalogs for detailed information or consult the Headmaster.

Certification for entrance to colleges belonging to the New England College Certificate Board requires that B grades shall be earned. Huntington has special certification arrangements with many colleges that do not belong to the Board.

SPECIAL COURSES

IN HUNTINGTON there are especially arranged courses for preparing boys for entrance to certain colleges.

For example, there is a two-year course in which a boy may be prepared to meet the requirements for entrance to the *Massachusetts Institute of Technology* provided certain previous requirements have been met. There is a special folder descriptive of this course which will be sent upon request.

In Huntington a boy will find especially arranged courses for entrance to the Boston University College of Business Administration, the University of Maine, Northeastern University, Worcester Polytechnic Institute and many other colleges.

An educational offering at Huntington that has helped many to earn needed credits is the Summer School. Here, full units may be secured for work done. This session is co-educational. Much time has been saved by a program including one or more regular school years and summer sessions. The Headmaster will gladly discuss such a program with those who have an interest in it.

TEACHER QUALIFICATIONS

PREPARATION FOR COLLEGE requires teachers who are not only especially trained but especially adapted for such work. In Huntington no teachers are engaged with less than five years of experience in the college preparatory field and certainly none on the staff are without understanding of the problems that most boys must face and solve if the college entrance situation is to be satisfactorily met. All teachers in Huntington are men who have been selected because of a demonstrated ability to work with boys.

PARENT-TEACHER CO-OPERATION

PREPARATION FOR COLLEGE when best accomplished requires co-operation from all persons involved; namely, the boy, his parents, his teachers, and the college Directors of Admission. At various periods throughout the year, Parent-Teachers Meetings are held. These meetings afford opportunity for the discussion of mutual problems. The Headmaster is always available for interviews with parents.

HUNTINGTON A RECOGNIZED SCHOOL

THE SCHOOL is recognized by the leading colleges. The School is a member of the New England Association of College and Secondary Schools and the Private School Association.

The School has full certification privileges as granted by the New England College Entrance Certificate Board. The School has a Cum Laude Charter.

SCHOOL POLICIES

HOURS OF ATTENDANCE

THE SCHOOL is in session five days each week. Attendance on Saturday mornings may be required of students who need supplementary instruction, who are behind in their work, or who are called back for disciplinary reasons.

The daily hours of attendance for boys in the Senior School are from 9.00 A.M. until 2.15 P.M. Recreational and extra-curricular activities are held after 2.15. Boys in the Intermediate School remain until 3.45 except on Fridays, when they are dismissed at 2.15.

The Intermediate School Schedule is as follows:

9.00 — 9.15	Assembly
9.15 — 12.15	Recitations
12.15 — 12.45	Lunch
12.45 — 1.30	Recitation
1.30 — 3.00	{ Physical Training, Games, etc., at Huntington Field every day except Friday during the fall and spring. During the winter this period is used for Play Activities in the Johnson Memorial Gymnasium and the Swim- ming Pool, and for Club Activities, etc.
3.00 — 3.45	Study Period

EXAMINATIONS

EXAMINATIONS are held at the close of each semester. Boys who fail in examinations must make up the deficiency within a reasonable time or enter a lower Form in the subjects in which they have failed. Unexcused absence from an examination means failure in the course.

MARKING SYSTEM

THE FOLLOWING is the marking system used by the School:

A	90% to 100%
B	80% to 90%
C	70% to 80%
D	60% to 70% (unsatisfactory)
F	Failure
Inc.	Incomplete

A is a mark of high distinction and is given to a student whose work approaches perfection, or it may be considered as a grade representing approximately the best that may be expected of a student.

B is given for work plainly above the average. Students who are to succeed in the best colleges should be able to attain this grade consistently.

C is given for average work. The standards of the School are such that students obtaining some C grades with a majority of B grades or better may expect to succeed in many colleges and will be recommended for entrance to many institutions not requiring B grades for certification.

D is given for work that lies between passing and absolute failure. It is often given to inform the student that by increased effort, he may place himself in the C group and then be in a position for even greater rewards. D does not count for diploma credit.

F indicates failure and requires repeating the subject.

Inc., meaning Incomplete, is given for work which may be ranked later as a result of make-up work or examinations.

TESTS

THE SCHOOL recognizes the need of having its students become accustomed to frequent testing. Entrance to college often requires ability to pass difficult examinations and successful progress in college is quite likely to depend upon one's ability to meet test situations satisfactorily. The School believes that a student can overcome the fear and nervousness incidental to taking examinations by being frequently tested. Short examinations are given often in all classes.

REPORTS

REPORTS of the boys' work are sent home frequently. Work missed for any logical reason is marked "incomplete" until made up, when the grade obtained in making up the work is substituted. Absence from an examination without a satisfactory excuse means a failing grade (F) in the course.

PROMOTION BY SUBJECTS

PROMOTION BY SUBJECTS rather than by classes is the ideal way to build up a good foundation for success in college. Why, for example, should a boy proceed with French II until he has mastered to a reasonably successful degree, French I?

Promotion by subjects requires a flexible schedule and a larger teaching staff than would be necessary in the usual situation. The Huntington School, realizing its responsibilities as they concern the preparation of boys for entrance to and especially for success in college, offers a schedule which can generally meet any need of those desiring college entrance units.

Graduation from the Huntington School and entrance to the great majority of the colleges requires evidence that fifteen units have been satisfactorily completed. This is a reasonable requirement. No student could expect to succeed in college unless he is capable of meeting it.

REGULATIONS

THE CO-OPERATION of all parents in the enforcement of regulations is requested. Each boy is expected to be punctual in his attendance at every school exercise. Dismissing a student before the close of the school day interferes seriously with the school routine and with the student's advancement. Only in case of unusual urgency should such requests be made. Outside appointments should be made at a time when they do not interfere with the school work.

When a boy is entered in the School it is understood that his attendance is controlled by the School. Absence from school except for sickness will result in inconvenience to the student.

The School does not seek to enroll students who require severe restrictions. The right is reserved by the School to dismiss any boy whose conduct, influence, industry, or progress is unsatisfactory in the judgment of the Headmaster.

DETENTION

THE SCHOOL reserves the right to detain students after the regular hours, or on Saturday, to make up back work, or for disciplinary reasons.

HONORS AND AWARDS

SCHOLARSHIP HONORS

THREE GRADES of honors for scholarship are conferred at the end of each grading period: "Highest Honors" upon all boys who have maintained a rank of A in all courses; "Honors" upon all boys who have not received a rank lower than B in all courses; "Honorable Mention" upon all boys who have received an average of B in all courses.

SCHOLARSHIP AWARDS

SCHOLARSHIP MEDALS are awarded at Commencement to the student in each Form in the School who maintains the highest rank during the year.

THE ALBERT WALTER SWENSON MEMORIAL MEDAL

ESTABLISHED in 1929 by Mrs. Swenson in memory of her husband. Mr. Swenson for nine years served the School faithfully as Head of the Modern Language Department and for two and a half years as Associate Headmaster. Awarded for excellence in French III to that student who has attended the School for at least one year.

THE CLASS OF 1928 MEDAL

ESTABLISHED in 1928 by the graduating class of that year. Awarded at Commencement to the member of the Senior Class who excels in English.

THE RICHARD JOHN CARROLL MEMORIAL MEDAL

ESTABLISHED in 1928 by the parents of Richard John Carroll, a graduate of the School in 1927 and president of his class. Awarded at Commencement to the student in the Junior Class who excels in English Composition.

THE ARTHUR STANTON CARLETON MEMORIAL MEDAL

ESTABLISHED by the parents of Arthur Stanton Carleton in 1930, the year in which Arthur would have graduated from the Huntington School had he lived. Awarded each year to the member of the Junior School whose play, spirit, and character have best maintained the traditions of the School.

THE ALBERT WALTER SWENSON PUBLIC SPEAKING MEDAL

ESTABLISHED in 1929 by friends of Mr. Swenson from the student body and alumni of the School. Awarded to the winner of the Public Speaking Contest.

CUM LAUDE SOCIETY

THE HUNTINGTON CHAPTER of the Cum Laude Society was established in 1928. This is a national honorary society which in preparatory schools corresponds to the Phi Beta Kappa Society in colleges. It is a distinct honor to be elected to membership in the Society. Each chapter has the privilege of electing to honorary membership full-time members of the instructing staff.

Each chapter may elect as members those students of the highest class in any academic course who have had an honor record up to the time of election and stand in the first fifth

of the class, choosing the whole number at the end of the school year, or not more than a tenth of the class at any time during the year and the remainder at the end.

EXTRA-CURRICULAR ACTIVITIES

THE SCHOOL sponsors several extra-curricular activities. These vary somewhat from year to year, depending upon the desires of the student body. Generally, we have a Public Speaking Group, a Literary Club, a Chess Club, a Current Events Club, a French Club, and a Science Club. One of the principal social events of the year is the Father and Son Banquet, at which certain groups of students provide the entertainment. In anticipation of this event, a Glee Club and Orchestra are organized. The School publishes a paper called *The Huntington Record*, and a number of boys are on the staff of this publication.

PHYSICAL EDUCATION

PHYSICAL EDUCATION may be defined as the process of developing the body in the right way. The policy of physical training in the Huntington School is a broad one. We are not concerned exclusively with bodily development but rather with general development. Accordingly we believe that the by-products of games and sports are of great importance. To secure the greatest benefits from a program of physical training the various squads must be under the direction of men who because of what they are and because of their leadership provide valuable character training.

All students, unless excused as a result of a certificate from the family physician, are urged to participate in some form of physical activity during the winter months. A gymnasium class meeting regularly each week is available for those not wishing to enter a definite sport.

A study which we have made seems to indicate that boys who refuse to become interested in any form of physical exercise seldom become successful students.

Play is just as much an essential part of any school program as study provided it is properly supervised. A well-balanced program of physical education invariably does much to increase efficiency in the classroom.

SPORTS

MANY DIFFERENT SPORTS are offered each season; such as, during the fall, football, track and tennis; during the winter, track, basketball, skiing and swimming; and during the spring, baseball, track and tennis. Each sport is directed by a coach who is experienced in directing athletics.

SOCIAL EVENTS

THE SCHOOL sponsors and supervises a well defined program of social events, namely, the Huntington School Promenade, the Father and Son Banquet, and the Commencement Dance.

OUTLINE OF COURSES

TEXTBOOKS AND COURSE CONTENT

ALL TEXTBOOKS are carefully selected; they are standard and meet the college entrance requirements. The various course contents meet in full the requirements as set by the leading colleges and universities and as outlined by the College Entrance Examination Board.

The School has a system of review previous to the College Board examinations which has proved most effective in preparing boys for these important tests.

INTERMEDIATE SCHOOL

STUDENTS will select, each year, with the advice of the Headmaster, twenty hours of work. Only the student of exceptional ability will be permitted to take more than a normal schedule of hours.

FORM I (FOURTH YEAR FROM COLLEGE)

- | | |
|-------------|---|
| ENGLISH | Drill in grammar, punctuation, and spelling. Study of the sentence. Study of elementary composition. Special attention to the development of good taste in reading. Class study of <i>Ivanhoe</i> , selected lyric poems and short stories. Individual reading of at least four books selected from the College Board List. |
| MATHEMATICS | The fundamental operations are thoroughly covered and in addition, stress is laid on a sound preparation for the college preparatory courses in Algebra. |

LATIN

In the Latin I course an effort is made to master such vocabulary, inflections and syntax as seems necessary as a foundation for college preparatory work in the subject. Much time is devoted to reading and writing simple prose and in establishing the proper relation between Latin and English words. Boys who have a competent knowledge of English grammar attain the best success in this Latin course.

SPANISH

A beginner's course which, although designed primarily for the student who will continue through a second year, will give a practical foundation of grammar enabling one to continue the language for his own pleasure. Pronunciation, dictation, reading of simple prose, oral practice.

ANCIENT HISTORY

Brief view of the near Eastern nations, stressing their contributions to civilization. Intensive study of Greece, Alexander's Empire, and Hellenistic period with special attention to political, intellectual and artistic development. Intensive study of Rome emphasizing political growth, development of legal system, economic problems, and cultural contributions. Study of the growth of the Christian Church, German conquests to the death of Charlemagne, and Mohammedanism. Map study. This course carries college entrance credit.

MECHANICAL DRAWING

Covers: use of instruments, geometric constructions, orthographic projection, isometric projection, working drawings of simple objects, developments and intersections.

FORM II (THIRD YEAR FROM COLLEGE)

ENGLISH	Continuation of the work of Form I in grammar, punctuation, and spelling. Study of the paragraph. Composition and memory work. Class study of Silas Marner, Idylls of the King, Sohrab and Rustum, Prisoner of Chillon. An introductory study of the essay. Individual reading of at least four books from the College Board List.
MATHEMATICS	The five books of Plane Geometry according to accepted standards. Emphasis on original proofs and practical applications. The course covers the College Board requirements.
LATIN	Rapid translation of four books of Caesar's Gallic War or an equal amount from approved authors, sight reading from Caesar, Nepos, Tacitus, or Pliny. Systematic study of grammar and Latin composition. Prepares for Latin 2 College Board Examination.
FRENCH	Study of the elementary principles of grammar. Practice in pronunciation and in easy conversation. Short written themes and reading of French stories ranging from the simple to those of moderate difficulty. Introduction to the study of irregular verbs and common idioms.
SPANISH	A thorough review of first year Spanish with more advanced work in grammar and composition. Much and varied reading places emphasis on comprehension. This course prepares for the Elementary Spanish examination of the College Board.

ANCIENT HISTORY

Brief view of the near Eastern nations, stressing their contributions to civilization. Intensive study of Greece, Alexander's Empire, and Hellenistic period with special attention to political, intellectual and artistic development. Intensive study of Rome emphasizing political growth, development of legal system, economic problems, and cultural contributions. Study of the growth of the Christian Church, German conquests to the death of Charlemagne, and Mohammedanism. Map study. This course carries college entrance credit.

SENIOR SCHOOL

FORM III (SECOND YEAR FROM COLLEGE)

ENGLISH

Continued study of rhetoric and composition. Précis Writing. Individual reading of at least six books from the College Board List. Introductory study of style and literary types. Class study of Modern Essays, Selected Poems, and House of Seven Gables. Thorough review of English grammar.

MATHEMATICS

Review of Elementary Algebra with more difficult problems. Simultaneous quadratic equations with applications, graphical solutions, variables, progressions, the binomial theorem, logarithms and the Trigonometry requirements of the College Entrance Examination Board.

LATIN

Study of Cicero's Citizenship of Archias, Manilian Law, and the four orations against Catiline. Sight reading of selections from other works of Cicero. Study in comprehension of passages selected from other authors. Continued study of composition and grammar. Prepares for Latin 3A College Board examination.

FRENCH	Continuation of the formal study of grammar and irregular verbs. Drill on vocabulary and the most frequently used idioms. Composition and translation of increasing difficulty. Conversational French. Preparation for Elementary French examination of the College Board.
GERMAN	A beginner's course. Drill in pronunciation and the rudiments of grammar. Exercises to fix in mind the forms and to cultivate readiness in translation. Reading of easy German.
SPANISH	Spanish courses offered in Form I and in Form II are open to students of this Form.
EUROPEAN HISTORY	College preparatory course from the beginning of the 17th century to the present time. Intensive study of the decline of absolutism and the development of democracy, particularly in England and France from the 17th to the 20th century. The rise of Russia and Prussia, the partition of Poland, the decline of Turkey, the emergence of Germany and Italy as national states is carefully studied. Great stress is laid upon international rivalries. Survey of social, scientific, and intellectual achievements. Special study of personalities. Map work.
CHEMISTRY	A standard college preparatory course in Chemistry. Lectures, recitations, laboratory experiments and problems with reference to practical applications of Chemistry in everyday science and industry. An appreciation of the science method is developed which helps the boy in later scientific studies.

FORM IV (SENIOR CLASS)

ENGLISH

Weekly written compositions. A detailed study of the main branches of literature. Practice in critical reading of specimens of modern literature and of classics acceptable for college preparation. An attempt is made toward an appreciation of excellence in literature, and in composition toward attaining some of the fundamental qualities of good style. Vocabulary building.

MATHEMATICS

Solid Geometry. The standard content of the four books of Solid Geometry.

Plane Trigonometry. The college entrance requirements in the subject are covered.

Advanced Algebra. Requirements for the Gamma College Board examination are covered.

Review Mathematics. This is a review course in Algebra and Plane Geometry for those contemplating taking the College Board examinations or for those seeking certification in these subjects.

LATIN

Rapid reading of the required amount from the works of Virgil and Ovid. Critical study of the prescribed reading. Sight reading with careful study of style. Study in comprehension of passages selected from other authors. Prepares for Latin 4A or Latin 4B College Board examination.

FRENCH

Continued study of grammar and composition. Review of irregular verbs and common idioms. Development of an adequate vocabulary based on word frequency. Drill to attain facility in oral comprehension and expression. Readings from French classics and modern works of moderate difficulty. Comprehension exercises on selections of greater difficulty. Dictation and the writing of original abstracts and themes. Special work for College Board examinations.

SPANISH	Spanish courses offered in Forms I and II are open to students in this Form.
GERMAN	Continued drill in grammar and syntax. Exercises in writing German from texts and dictation. Reading of Modern German prose. Preparation for the Elementary German examination of the College Board. Composition work.
AMERICAN HISTORY	College preparatory course. Study of background. Special reference to development of independence and a strong national government. Intensive study of sectionalism culminating in Civil War, currency, tariff, banking, industrial growth particularly following the Civil War, democratic reform, foreign relations. Biographical study. Map work.
PHYSICS	The standard college preparatory course in Physics, dealing with the phenomena of mechanics, heat, electricity, sound, and light. Lectures, recitations and sufficient laboratory experiments to meet the college entrance requirements. Mathematical problems and discussion of practical applications. Special emphasis upon logical scientific thinking to form correct habits for college and later life.

BUSINESS SUBJECTS

THESE COURSES provide excellent preparation for colleges of Business Administration and valuable practical training.

ECONOMICS	A study of the principles underlying our economic order, and an attempt to recognize and evaluate the economic implications of the pressing political and social problems of today; such as, banking, credit, distribution of wealth, domestic and foreign trade, labor problems, etc.
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BUSINESS LAW	The principles of business law, including contracts, sales, negotiable instruments, agency, partnerships and corporations. A good introduction to the study of law.
BOOKKEEPING	This course covers the bookkeeping cycle with emphasis on the theory of adjustments at the close of the fiscal period. An attempt is made to equip the student with a solid basis for the study of college accounting.
BUSINESS ARITHMETIC	An intensive review of the fundamentals of basic arithmetic: addition, subtraction, multiplication and division; and especial attention given to percentage and discount. An attempt is made to develop arithmetic reasoning in the solving of problems.
COMMERCE AND INDUSTRY	A study of the natural resources of the World and of their importance to the development of commerce and industry. Particular attention is given to the economic growth of countries, and to the interdependence of nations. A second semester report is required in which the student is to apply the content of the course to a practical situation.

FINANCIAL

THE TUITION RATE for all students enrolled in a regular schedule (four or more subjects) is \$450 payable as follows:

On or before the opening day of School...	\$150.
November 1.....	\$150.
February 1.....	\$100.
April 1.....	\$ 50.
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Total.....	\$450.

FEES

A registration fee of \$5 is due from all new students when a place is reserved. When once paid, it will not be refunded.

When an applicant enrolls in the School, it is understood, unless otherwise specified, that he enrolls for the entire year.

The only other fee is that required of graduates; namely, ten dollars, to cover a portion of the graduation expenses. This includes the cost of the diploma. There are no other fees such as laboratory fees, athletic fees, mechanical drawing fees, etc.

In other words, the tuition charge for all regular students covers all school expenses except books and supplies.

SPECIAL STUDENTS

Because of the flexible schedule in the Huntington School those who so desire may generally enroll in separate subjects. Students so enrolled, provided not more than three subjects are pursued, are classified as special students. Rates charged are on the basis of the schedule taken.

CHARGES FOR MEDICAL ATTENTION

The School will not assume responsibility for injuries received or for expense incurred because of necessary medical attention in connection with participation in athletics.

All financial obligations to the School must be met when due. A diploma cannot be awarded or credit given for work done in the School in any case where there is money due for tuition or supplies.

SCHOLARSHIPS

THE TRUSTEES OF THE SCHOOL believe that a frank statement should be made in regard to scholarships.

AT THE HUNTINGTON SCHOOL the class groups are small, the teachers are experienced and especially trained for work in the college preparatory field, and the program is unusually comprehensive. The School has one of the largest and best equipped plants of any private day school in Greater Boston.

BECAUSE of these facts, it is expected that all who are able to pay the full tuition shall do so.

THE TRUSTEES OF THE SCHOOL are aware, however, that certain boys of good character, who have the qualities that the colleges expect to find in those whom they accept, need some financial assistance in order that they may further prepare themselves for entrance to some higher institution of learning. Because of this, a sum of money has been set aside for the purpose of making available to such boys Trustee Scholarships amounting to not more than \$150 each. These scholarships are awarded on the basis of character, previous school record, real financial need, and the probability of success in college. In view of the fact that the number of such scholarships is limited, applications for them are considered in the order received. A personal interview with the Headmaster of the School is required by each applicant who is in need of financial assistance. Detailed information in regard to one's financial situation may be asked for.

THE HUNTINGTON SCHOOL is glad to extend to the sons of clergymen, teachers and social workers the privilege of accepting a special tuition rate. Obviously, boys so classified must also meet the usual scholastic and character qualifications.

THE SCHOOL reserves the right to discontinue financial aid to any boy whose record is in any respect unsatisfactory.

REFUNDS

THE SCHOOL assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore no refunds are granted except in cases where students are compelled to withdraw on account of personal illness.

REFERENCES

APPLICANTS for admission to the Huntington School must furnish the names of two persons, not relatives, who are able to vouch for the character and ability of the student and the financial responsibility of the parent.

The School is always pleased to refer those who inquire to parents, alumni, or educators, who are thoroughly familiar with the work of the School. Names and addresses will be furnished upon request.

Most of our students come to us through the recommendation of former students and their parents and of college deans.

HUNTINGTON SUMMER SCHOOL

EACH year, the School conducts a Summer Session beginning about the first of July and ending about the first of September.

The Huntington Summer School was established in 1912 and since that time has prepared a large number of students for entrance to the New England colleges and others outside this area.

The aim of the School is to provide tutoring and class instruction for those who are conditioned in grammar school, high school or college entrance subjects; for those who wish to complete a four-year high school course in three years; and for those who wish to make special preparation for entrance examinations to New England colleges.

The program of work includes all the courses accepted for admission by colleges, together with work usually given in the eighth grade.

The teaching force is made up of the men of the regular school faculty.

The Summer Session is co-educational.

The classes are small. The program of work is so arranged that a year's work in any course, as ordinarily counted by high schools, is completed during the Summer Session. Students who elect work which they have not before attempted usually pursue only one or two courses. Those who are reviewing are limited only to the amount of work that they can do well.

CHARGES

The rate of tuition in the Summer School is as follows:

One subject.....	\$ 50.
Two subjects.....	\$ 90.
Three subjects.....	\$120.

TUITION is not refunded because of withdrawal or change of schedule. A laboratory fee of \$10 is charged all students taking either Chemistry or Physics.

Each student pays a registration fee of \$5 in addition to the tuition rate. Fees are not refunded in case of withdrawal. All fees are in addition to the regular tuition charge.

The charge for individual tutoring is \$2.50 an hour.

Three-fifths of the tuition is due upon entrance, plus the registration fee. The balance, including laboratory fees, is due on August first.

A special circular of this School will be forwarded upon request.

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

DURING THE YEAR 1939-40, students were enrolled in the Huntington School from the towns and cities listed below:

Abington	Greenfield	Newton
Allston	Hanover	Norwood
Arlington	Hyde Park	Peabody
Belmont	Jamaica Plain	Revere
Beverly	Lawrence	Roslindale
Boston	Lexington	Roxbury
Brighton	Lowell	Somerville
Brockton	Lynn	Stoughton
Brookline	Lynnfield	Wakefield
Cambridge	Malden	Watertown
Camden, Maine	Marlboro	Webster
Canton	Mattapan	Wellesley
Chelsea	Medford	West Roxbury
Chestnut Hill	Melrose	Weston
Dedham	Middleboro	Westwood
Dorchester	Milton	Wh. Riv. Jct., Vt.
Everett	Needham	Woburn
Gloucester		Wollaston

COLLEGES WHICH HUNTINGTON GRADUATES HAVE ENTERED

HUNTINGTON sends approximately sixty boys to college each year. During recent years, graduates of the School have entered the following institutions of higher education:

Acadia University	North Carolina State College
Amherst College	Northeastern University
Babson Institute	Norwich University
Bates College	Oberlin College
Boston College	Ohio State University
Boston University	Penn. Military College
Bowdoin College	Penn. State College
Brown University	Rensselaer Polytechnic Institute
Cambridge University (England)	Rhode Island State College
Clark University	Springfield College
Colby College	Syracuse University
Colgate University	Temple University
College of William and Mary	Tufts College
Columbia University	U. S. Coast Guard Academy
Cornell University	U. S. Military Academy
Dartmouth College	U. S. Naval Academy
Duke University	Union College
Fordham University	University of Alabama
Franklin and Marshall College	University of Colorado
Georgia School of Technology	University of Illinois
Gettysburg College	University of Iowa
Harvard University	University of Kansas
Holy Cross College	University of Maine
Lehigh University	University of Michigan
Lowell Textile Institute	University of New Hampshire
Mass. College of Pharmacy	University of Notre Dame
Mass. Institute of Technology	University of Pennsylvania
Mass. School of Optometry	University of Vermont
Mass. State College	Virginia Military Institute
Miami University	Washington and Lee University
Michigan State College	Wesleyan University
Middlebury College	Western Maryland College
N. E. Conservatory of Music	Worcester Polytechnic Institute
Nichols Junior College	Yale University

GENERAL SCHOLARSHIP FUND

We feel that it is the duty of every college preparatory school to make some contribution towards the education of worthy boys who have the ability to go to college and who should, as a matter of fact, have a college training. We feel that there are many among the alumni and friends of the School who are glad to help such boys by making contributions to a general scholarship fund. Such contributions should be sent to the school office and checks should be made payable to the Huntington School.

FORM OF BEQUEST

While it is not necessary, it would be appreciated if those contemplating gifts or bequests would confer with the Headmaster of the School regarding the needs of the School before legal papers are drawn.

Funds given to the School should be left in the following manner:

“I give and bequeath to the Huntington School for Boys
the sum of.....dollars.”

HUNTINGTON SCHOOL FOR BOYS

APPLICATION FOR ADMISSION

Applicant's full name

(First Name)

(Middle Name)

(Last Name)

Home address

Date of birth

Place of birth

Father's name

Father's occupation

Business address

Home telephone

Business tel.

Religious preference

Condition of health

College you wish to enter

When?

Schools attended

Name and address of two persons not connected with your family, to whom we can refer.

Name

Address

Name

Address

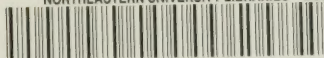
Date

Signed

Parent or Guardian

NOTE: A registration fee of \$5.00 must accompany this application.

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